



# Ethiopian TVET-System



## **Basic Leather Garments and Goods Production Operations LEVEL I**

Based on May 2012 Occupational Standards

May, 2020



## **Module Title: Performing Basic Cutting**

**TTLM Code: IND BLG1 TTLM 0919V1**

**This module includes the following Learning Guides**

**LG18: Prepare for Work**

**LG Code: IND BLG1 M05 LO1-LG 18**

**LG19: Asses Leather**

**LG Code: IND BLG1 M05 LO2-LG 19**

**LG20: Cut Leather by Hand**

**LG Code: IND BLG1 M05 LO3-LG 20**

**LG21: Check Cut Components**

**LG Code: IND BLG1 M05 LO4-LG 21**

**LG22: Dispatch Completed Work**

**LG Code: IND BLG1 M05 LO5-LG 22**

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**Instruction Sheet****LG18: Prepare for Work**

**This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –**

- Set up workstation according to specification and safety Procedures
- Obtaining Cutting patterns and studying specifications
- Selecting and preparing cutting tools
- Collecting, sorting and laying out materials
- Cleaning and making ready to use cutting board

**This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –**

- Workstation is set up according to specifications and safety procedures.
- Cutting patterns are obtained and specifications are studied.
- Cutting tools are selected and prepared according to specified work.
- Materials are collected, sorted and laid out in preparation for cutting.
- Cutting board is cleaned and ready to use.

**Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow all the instructions described.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” in page 9.



5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions.
7. Submit your accomplished Self-check. This will form part of your training portfolio.
8. Accomplish the “Self-check 2” in page 17.
9. Ask your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 2).
10. Read the information written in the “Information Sheets 3”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
11. Accomplish the “Self-check 3” in page 25.
12. Ask your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 3).
13. Read the information written in the “Information Sheets 4”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
14. Accomplish the “Self-check 4” in page 29.
15. If you earned a satisfactory evaluation proceed to “Operation Sheet”. However, if your rating is unsatisfactory, see your teacher for further instructions.
16. Read the “Operation Sheets 1, 2, 3 & 4” in pages 31 – 74 and try to understand the procedures discussed respectively.
17. Do the “LAP test” in page 33, 35, 71 & 75 (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the

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evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advise you on additional work. But if satisfactory you can proceed to Learning Guide #19.

<b>Information Sheet-1</b>	<b>Set upping workstation according to specification and safety procedures</b>
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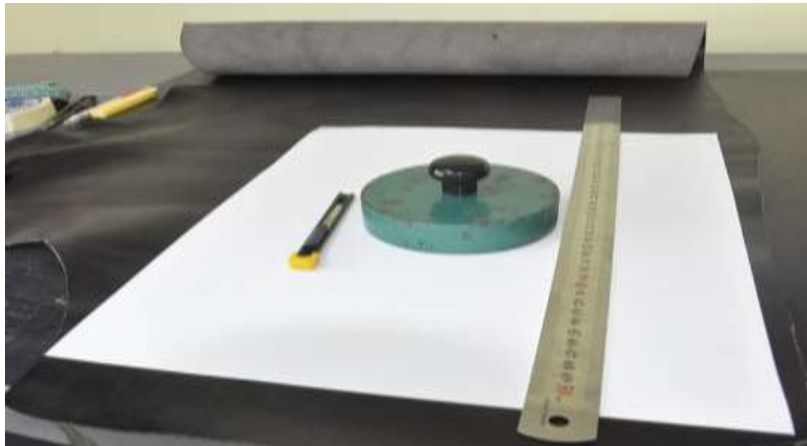
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## 1- Work station set up According To Specifications and Safety

### Procedures

Work station is defined as an area, outfitted with equipment and furnishings for one or more workers. Normally leather products are operated in a work shop therefore the work station for a leather goods/garments worker would be the work shop. It is necessary for a worker to prepare his work station and the pieces to be done Well-arranged working area i.e. properly sated machineries, assembling areas, good and safe placement of tools and equipment facilitates and motivates a worker to do his/her job in a good and respectable way but before doing so a worker should be well aware of the safety rules and regulations.



Having created a good working area, the subsequent effort would be put for allocation of work according to the departments/sections. The process of cutting starts after the patterns of the particular product are being completed.

Once the patterns are completed and delivered to the cutting department/section with their specification the next process would be selecting the specified leather and all other necessary materials to be cut (including the color and texture according to the specification given), making ready the necessary tools and equipment, assorting which is a vital process carried out by highly skilled technicians before starting to cut. It must be done under perfect lighting system so that its quality can be assured. Leathers are assorted according to thickness needed for various parts of the product, size, color, defects, texture, and stretch/elasticity. The person should know the various defects that could exist on the skin/hide and mark them on the leather using silver marking pencil so

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that it would be visible enough while cutting and he/she must also know where to apply cutting i.e. matching the section of the leather with the part of the product to be cut. Visible areas should be cut from the best section of the leather. But before going through the process the person (cutter) should be aware of the safety procedures and ergonomic principles for a better and organized work.

## 1.1 Ergonomics and safety

Safety means the quality of being safe or freedom from danger or risk of injury. It is a contrivance or device designed to prevent injury. Work shop safety is extremely important both to workers and managers (owners).

Generally leather product processing is not as dangerous as many other manufacturing plants, but occasionally accidents can happen. It is easier to prevent accidents before it occurs rather than later.

Accidents related to this sector are hereby categorized:-

### **Electricity:**

Occurs when connections are faulty such as:

- Quality of Cable is not fit for the given power.
- Improper Cable insulations.
- Circuit breaker is not installed/ not working or too strong.
- Current flow can stop if proper fuses are not used.

**Fire:** can destroy all the work of years

- Incorrect power connections can heat up cables and produce sparks (fire)
- scouring/rubbing of metal causes small sparks which can glow for hours before igniting (usually occurs when nobody is around)
- Handling of flammable liquids such as alcohol, solvents and glue (the storage of all FLAMMABLE materials must be away from the working area and stored safely)

### **Others**

- Improper shelf storage of tools and materials, can lead to accidents.
- Badly placed tools/devices like hot air blower can injure people

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- Poor furniture can injure people
- Slippery surfaces can lead to accidents.
- Poor knowledge of machines and equipment
- Poor condition of tools and equipment

Understanding the reason behind this kind of accidents is not enough for a worker. It is also necessary to take precaution before they happen.

## **Ergonomics**

Ergonomics is the science of making the job fit to the worker. The objective is to create a safe, comfortable workplace that will reduce the potential for injury. Workplaces that are ergonomically not ideal can lead to discomfort and low morale at the very least, with the added possibility of worker injury. Most areas of work in factories carry at least the risk of back and upper limb pain and problems due to the nature of repetitive manual handling and awkward postures.

The results can be loss of productivity and product quality, and absenteeism. It is therefore in the interests of the employer and employee that ergonomic objectives are considered. The following are some basic ergonomic guidelines and principles:-

- Stand or sit with the work in front of you – avoid twisted postures.
- Employ smooth, rhythmical movement – avoid sudden changes of direction
- Keep things on the level to avoid vertical movements
- Avoid sudden changes of direction
- Avoid continuous repetition of movement
- Avoid stretching where possible – keep items used frequently within arm's reach
- Chairs should provide support for the lower part of the back, and the worker should sit so that his/her back at the lower most curved part, is in contact with this support whether standing or sitting the individual worker should be able to adjust his/her position to enable the requirements.

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<b>Self-Check 1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- 1- What is meant by work station?(5pts)
- 2- Discuss about ergonomics and safety?(5pts)

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**Note: Satisfactory rating – 10 points**

**Unsatisfactory - below 10 points**

you can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-2</b>	<b>Obtaining Cutting patterns and studying specifications</b>
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**Locating cutting patterns and studying specifications once the patterns are ready:-**

- Cutting should start from butt to belly (i.e. from left to right side and from bottom to top).
- Make sure that it is the correct pattern of the article you desire to cut.
- Examine for defects, size and shape of hide/skin.
- Selective cutting must be practiced; the best part of the article demands the best part of the hide/skin.
- Visible area should have good grain surface and section covered could contain grain defect.



- Good cutting begins with a sharp knife less sharpens or blunt knife cuts the leather with rugged edge.
- Over cutting and under cutting must be avoided.
- Pattern must be placed in such a way to insure quality, economy and minimum wastage.
- Straight line cutting must be done first with steel scale/ruler curved line cutting or regular shape must be cut with templates.
- Cutting must be done on a smooth surface of soft wood, play wood, galvanized iron plate or zinc plate for accurate cutting.
- Start cutting from left top corner of the pattern and end at the right bottom corner.
- Cut through the leather in one stroke.

#### **General rules that a hand cutter should be aware on while cutting the leather**

- Closely inspect the leather for any defects, these include surface marks, flay cuts, loose offal and mark these areas for ease of identification.
- Check the flesh side of the skin for warble hole and fly cuts.
- Check for the correct line of tightness as this will vary slightly from skin to skin.
- Check the components to be cut make sure that all patterns are there.
- Ensure that your working bench is clean.
- From your cutting sheet select the largest size patterns
- Variations in color
- Grain matching
- The cutter must test his leather for stretch, to ensure that the cut parts are correct.
- After grading and selection the cutter should select for cutting leathers from the horse
- Ensure that your patterns are smooth and your knife is sharp
- After cutting the leather must check the quality of his product, and place it on the bench in front of him.

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## Step 1: What You'll Need

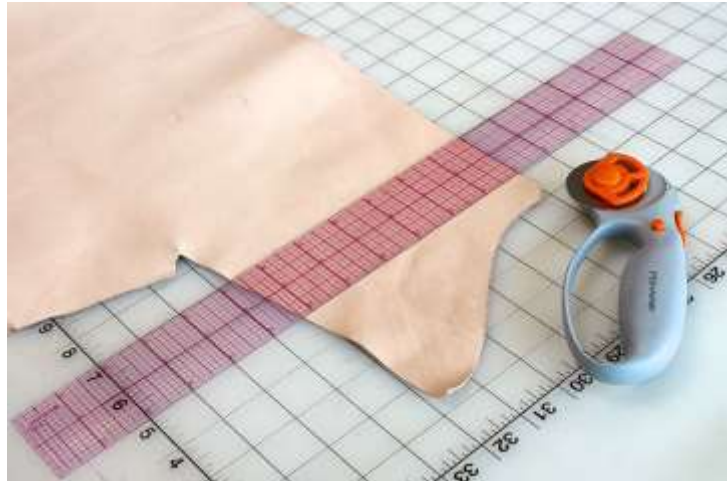


- self-healing cutting mat
- hobby knife with a sharp blade
- rotary cutter
- heavy ruler
- leather for cutting

You can definitely use scissors to cut leather, it's not ideal. On thin leather you might not get a nice straight cut because your cut line can move a little every time you move the scissors to take another snip. On thick leather, you might not be able to cut it at all. And even if you do, you'll have to use more force than normal, which can cause jagged and squished edges. (And perhaps break your scissors!)

## Step 2: Before You Cut

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Depending on what you're cutting out, you might want to lay it out and mark it on the leather beforehand.

For example, if you're cutting out a wallet that has multiple pieces, it can be a good idea to scope out the grain side of the leather and find a nice area with no major imperfections. Then flip the leather over, copy the pattern using a pen on the flesh side, and cut it out from that.

If you don't want to mark up the leather with a pen, the other option is to cut the pattern out of thin plastic or cardboard and use those edges as a guide for cutting.

Making a stiff pattern/template is especially good if your pattern includes curves.

### **Step 3: Cutting Thin Leather**

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Cutting thin leather (1 mm thickness or less) is best done using a rotary cutter. Because it's thin and more fragile, using a hobby knife can pull and crease the leather as you try to drag the knife across it. The leather's much more prone to moving, so it's harder to get a straight crisp line.

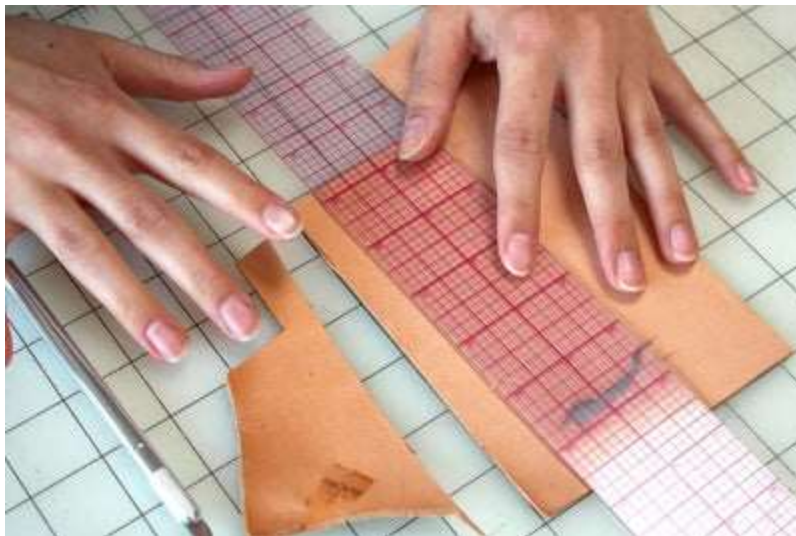
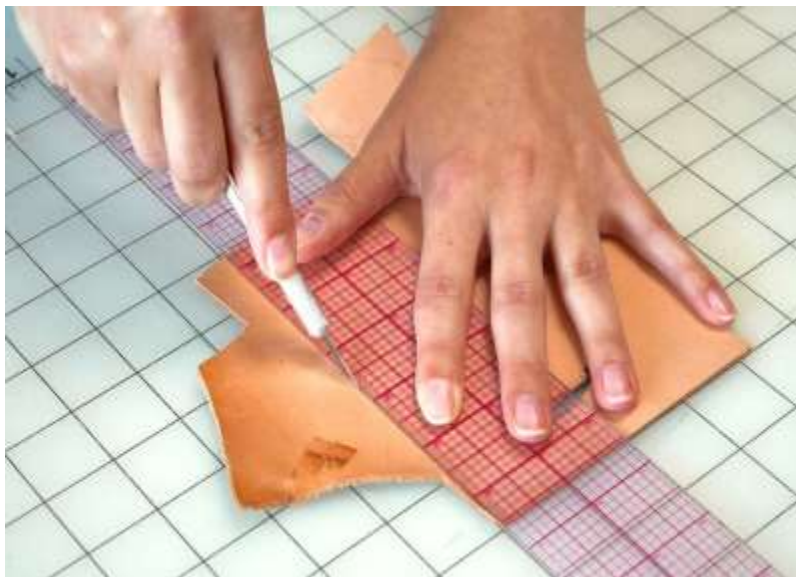
Using a rotary cutter allows you to apply even pressure on a larger area. Just make sure the blade is nice and sharp so you don't have to do a ton of passes.

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Lay the leather down so the grain side is facing up. Place a ruler on top and use the edge of the ruler as your cutting guide. Make sure to keep the rotary cutter right against the edge of the ruler for best results. :

## Step 4: Cutting Thick Leather







Thick leather is much easier! All you really need is a nice ruler and a hobby knife.

Lay the leather down grain side up and place the ruler on top. Use the edge as a cutting line again - just drag the hobby knife along the cut line gently.

You'll want to make lots of small passes if the leather is especially thick. Keep the ruler stationary at all times and make sure you're keeping the knife's edge up against the ruler.

It normally takes between 2-4 passes to totally cut through.

<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. State some general rules that a hand cutter should be aware of?(5pts)
2. Describe the procedure during cutting leather. (5 points)



**Note: Satisfactory rating – 10 points                      Unsatisfactory - below 10 points**  
you can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_  
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This is called a hand cutting knife with a solid non- detachable blade. The extra length of the blade makes this an excellent knife for cutting synthetic rolls in to various lengths.



#### **b- Scalpel**

This knife is used extensively by pattern cutters and European clickers. The jaws are placed in to the handle.



#### **c- Snap off blade knife**

The knife is held slanting 300 along the straight line and almost at a perpendicular position while cutting curves. It is recommended for pattern cutting. The blade in this knife can be broken off on stage to give the cutter a new sharp cutting edge. The blade is held in to place by the finger adjustment.

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### **Cutting safety**

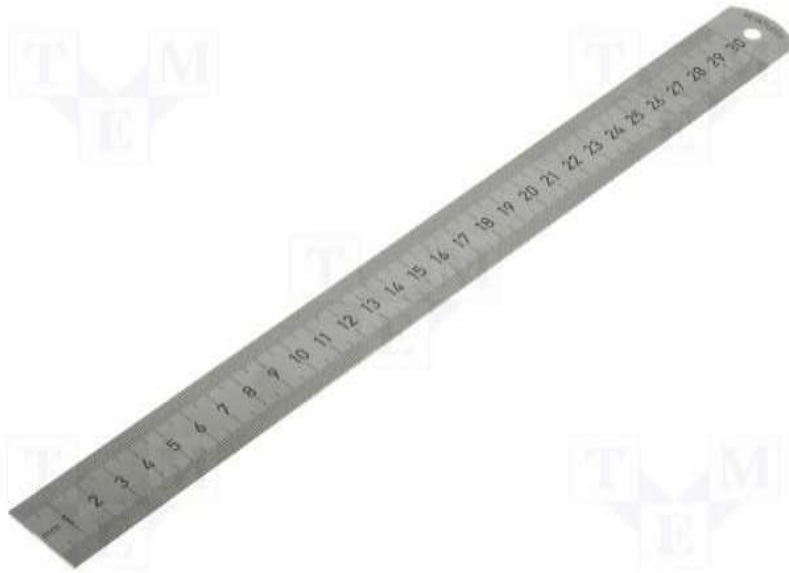
Leather cutting knives are sharp and dangerous; therefore, students should be aware how to use these knives correctly and safely.

- 1- When cutting with a sharp knife always cut the leather away from the body, wherever possible.
- 2- Keep fingers away from the blade.
- 3- Do not overstretch the arms during cutting, as this reduces the hand pressure, alters the angle of the knife and reduces the knife control at the point of cutting.

### **3.2- Scale/steel ruler**

It is recommended for use when cutting straight lines with length of 500mm (mille meter) from safety point of view. Sufficient thickness of ruler is necessary minimum 2 mm.

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### 3.3- weight/load

It is a material made from steel and used to hold the material (leather) against the cutting table so that the leather will not move while the cutting process is held. It also helps to cut the component in a better quality.



### 3.4- Marking awl

It is a sharp steel prick mostly used to mark holes in the pattern and or thin leather, pockets, button holes and different marks.



### **3.5- Tracing wheel**

It is an instrument with multiple teeth on a wheel attached to a handle. The teeth can be either serrated or smooth. It is used to transfer markings from patterns tracing paper. This sewing tool also makes slotted perforations. Such markings might include pleats, darts, buttonholes, notches or placement lines for appliques or pockets.



### **silver marking pencil**

Silver marking pencil is used to mark defects on leather while assorting and to mark on patterns on leather for cutting components to achieve the maximum cutting value. It is also used to mark on the components for fixing fittings with the help of patterns.



### 3.6- oil stone/sharpening stone

Used with two surfaces i.e. coarse and fine in order to sharpen the knife.



### strop

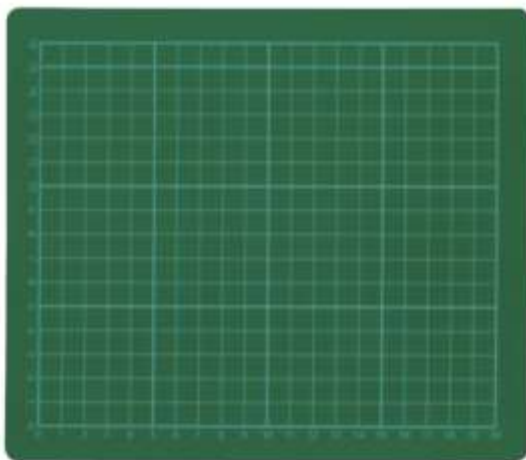
A heavy leather strap, grain-side down glued on to wood (plywood). This will give a high polish to the knife and awl blades.





### 3.7- Cutting mat

There are different cutting blocks plastic matt, glass matt, wood matt, zinc matt and rubber sheets matt which are used for hand cutting. The cutting matt should always be flat and convenient. Cutting mat should be kept clean of glue and other liquid avoid other materials below your cutting mat while cutting.



### Proper handling of cutting tools and equipment

A good craftsman will store his tools in a safe place. This will prevent damage to the tools when not in use and help to keep them in a first class condition. Always cover sharp tools with a sheath made of leather or fabric.

<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- 1- Write the major tools that are necessary for hand cutting in particular?(5pts)
- 2- What is the recommended length and thickness of a steel ruler?(3pts)
- 3- What is the purpose of tracing wheel?(2pts)
- 4- Discuss about the different types of knives and their uses?(5pts)

**Note: Satisfactory rating - 15 points                      Unsatisfactory - below 15 points**  
You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

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Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

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<b>Information Sheet-4</b>	<b>Collecting, sorting and laying materials</b>
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**4.1 collecting sorting and laying materials in preparation for cutting**

While sorting leather keep hide flat rather than rolled up. A wooden horse 1 meter wide and 1.25 meters height should be suitable to accommodate even largest hides. Hanging

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the leather by this method for some time will often help to remove creases that have been formed when the leather was bundled. Grain leathers can be rolled up, grain side outwards with the neck to the center, with final skin rolled with the grain surface on the inside. Wrapping brown paper particularly for vegetable tanned leather is recommended. Split leather is best if kept flat.

Synthetics, fabrics, reinforcements and wadding materials are available in roles and are easy for sorting.

<b>Self-Check 4</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- 1- What is the purpose of wooden horse? (5pts)
- 2- Explain how leather is rolled? (5pts)

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**Note: Satisfactory rating - 10 points**

**Unsatisfactory - below 10 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_  
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2.

<b>Operation Sheet 1</b>	<b>Procedures of holding knife</b>
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Follow the following steps in order to properly hold your knife/cutter

**Step 1:-** hold the knife with thumb and middle finger



**Step 2:-** press with index finger



**Step 3:-** ring finger and ladies finger are guiding the direction and should be laid in to the cutting material



**Step 4:-** pierce the knife at the point of depart, make suitable angle ( $30^{\circ}$  for straight and at list  $60^{\circ}$  to  $90^{\circ}$  for curved) and apply suitable pressure pull it towards from the top to

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the bottom and or from left to right according to the exercise given. Whenever you practice cutting, keep the movement of hand from elbow. Keep wrist locked, keep shoulder locked.

<b>LAP Test</b>	<b>Practical Demonstration</b>
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

**Instructions:** based on the practice that you have made on how to hold your cutter/knife on the paper exercises

**Task 1:** show how to hold knife during cutting.

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<b>Operation Sheet 3</b>	<b>Collecting, sorting and laying materials</b>
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- When bundling the leather, start from the butt and roll it over until you reach the neck on the grain side so that it would be easy to store.





- Before starting to cut put the leather on a wooden horse so as to flatten the leather which was sort in a roll.



<b>LAP Test</b>	<b>Practical Demonstration</b>
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

**Instructions:** based on the practice that you have made on how to hold your cutter/knife on the paper exercises

**Task 1:** Show how to collect, bundle and sort different leathers.



<b>Operation Sheet 3</b>	<b>Paper Cutting Exercises</b>
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Under this operation sheet 16 different paper cutting exercises are to be performed. In each of the exercises, you are expected to cut 5 pieces. However, if your performance is poor you are expected to cut more pieces.

**Exercise1:**



LG GMT/L-01/M-02



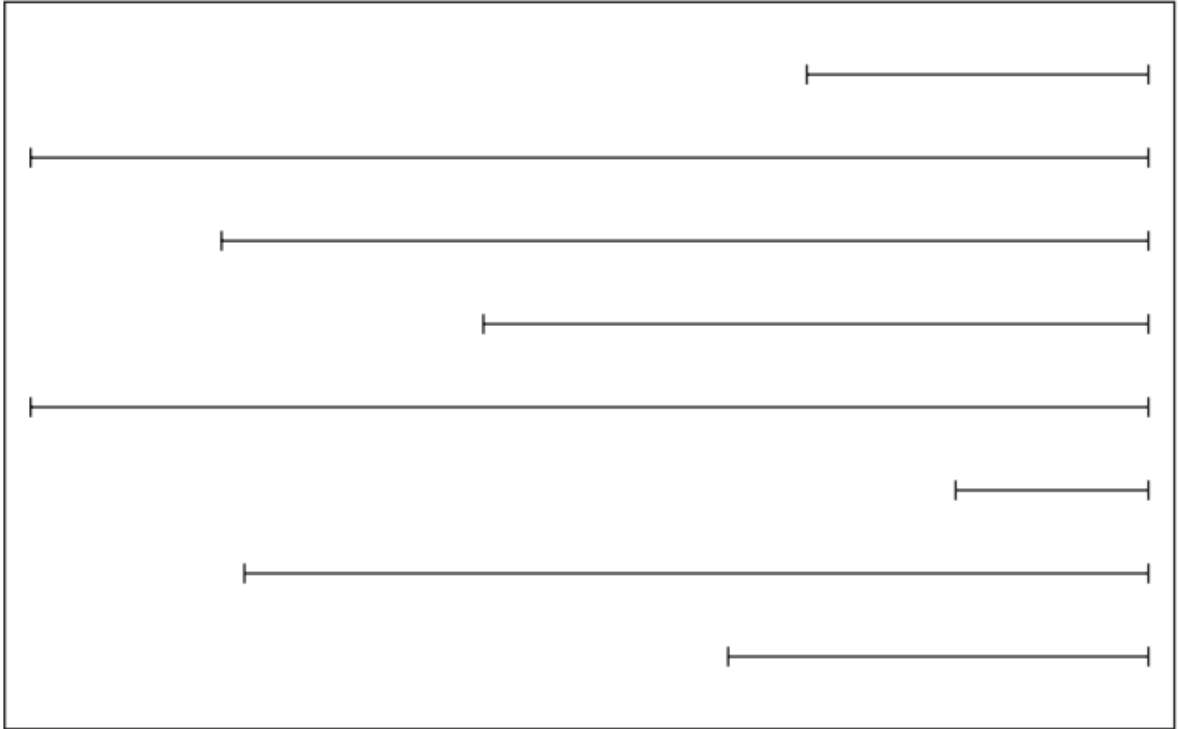

VERTICAL LINE CUTTING EXERCISE


<b>Exercise No. : 01</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 2:**



LGGMT/L-01/M-02





VERTICAL LINE CUTTING EXERCISE

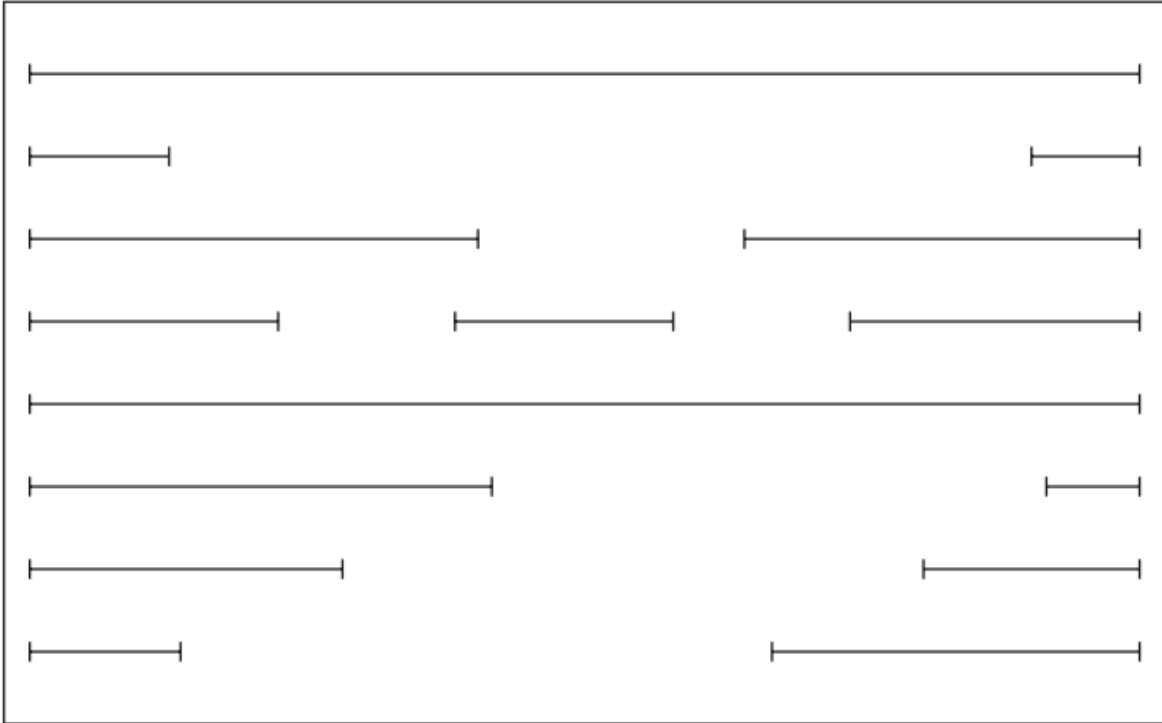
<b>Exercise No. : 02</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 3:**





LGGMT/L-01/M-02





VERTICAL LINE CUTTING EXERCISE

<b>Exercise No. : 03</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 4:**

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**HORIZONTAL LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





<b>Exercise No. : 04</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 5:**



**HORIZONTAL LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**

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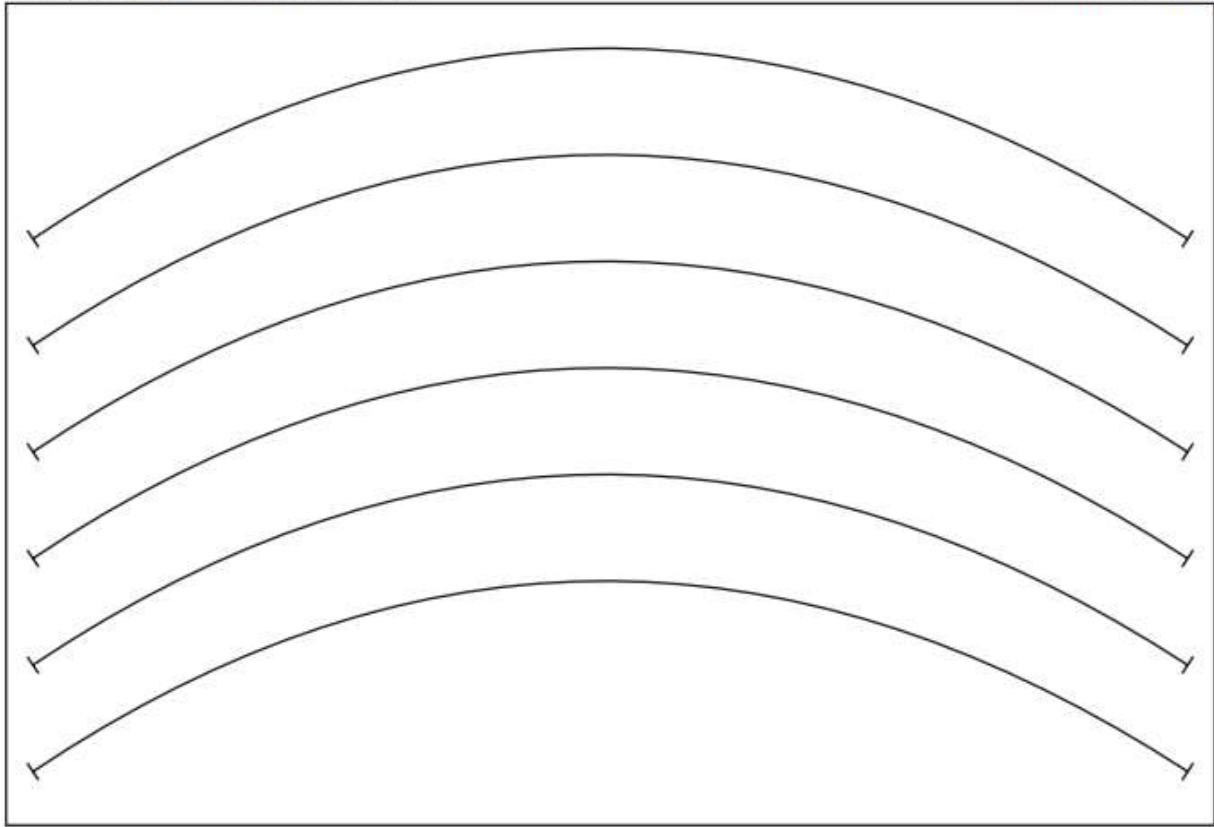

<b>Exercise No. : 05</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 6:**



**CONCAVE LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





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<b>Exercise No. : 06</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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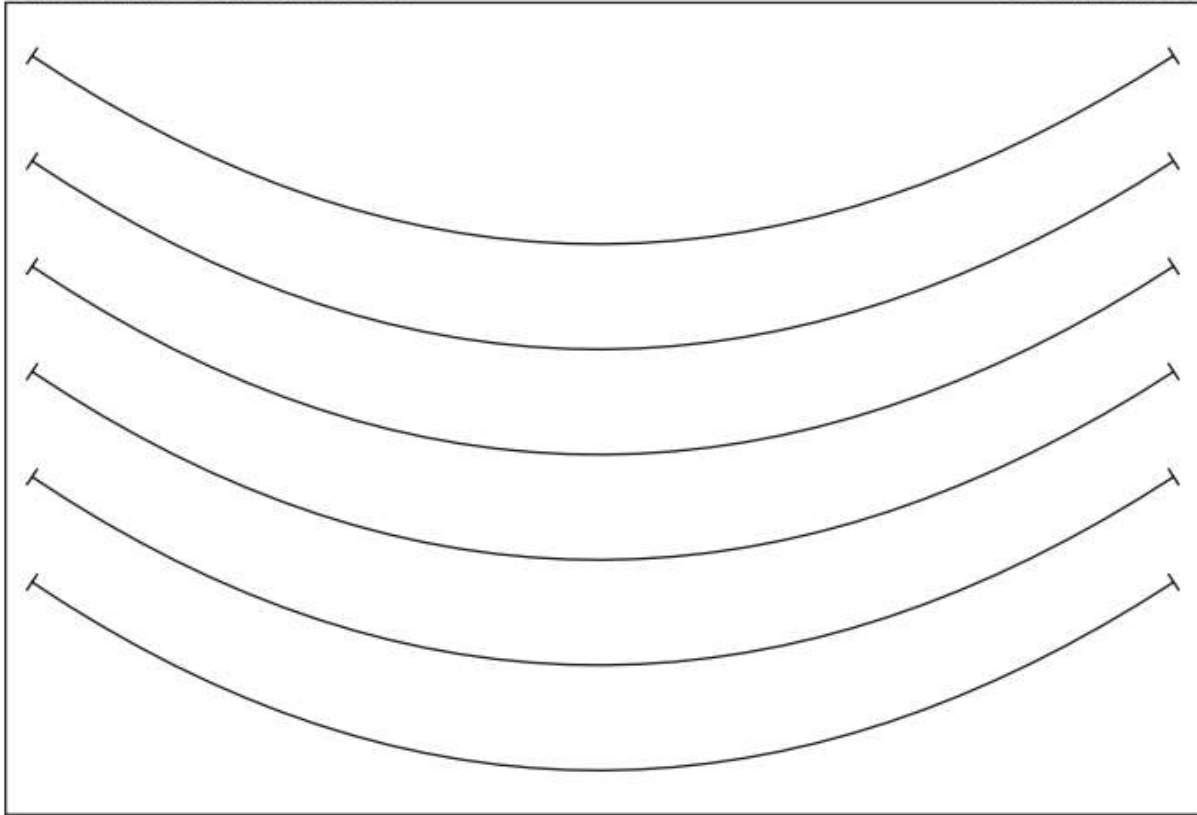
### Exercise 7





**CONVEX LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





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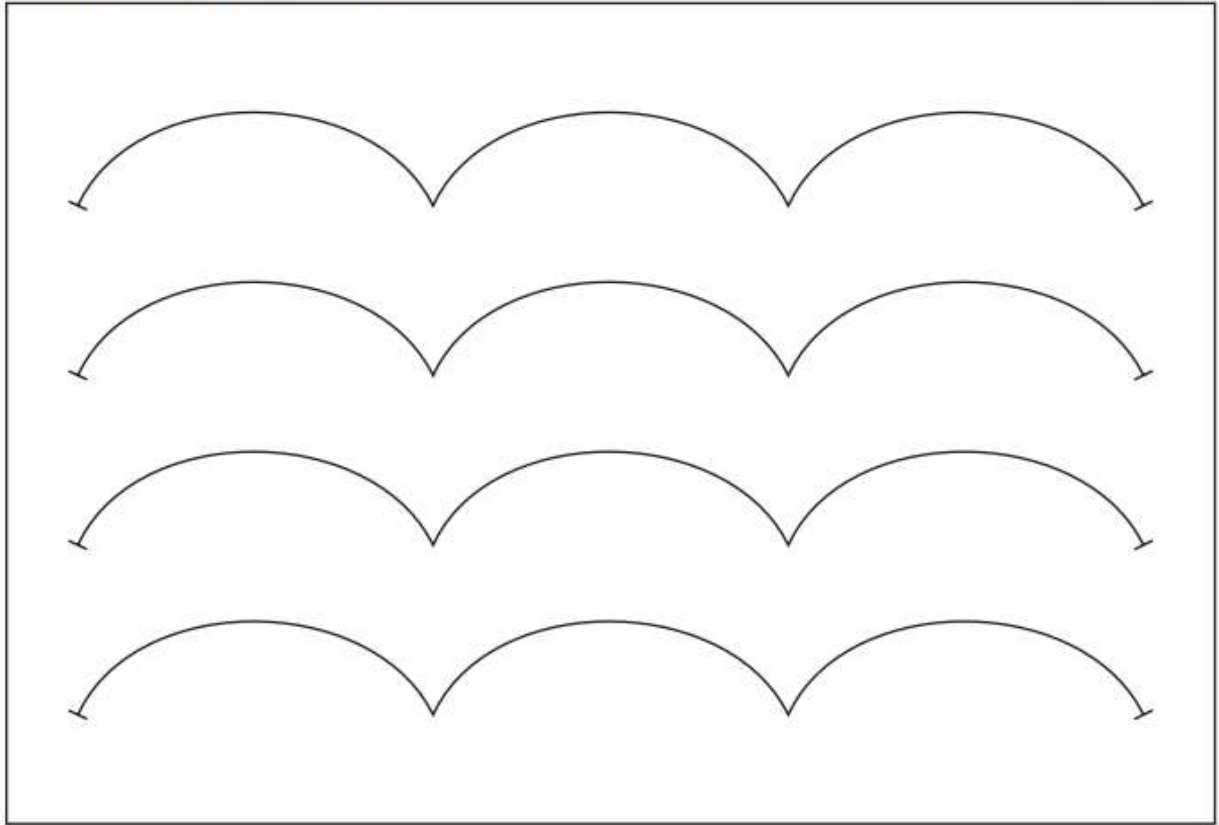
<b>Exercise No. : 07</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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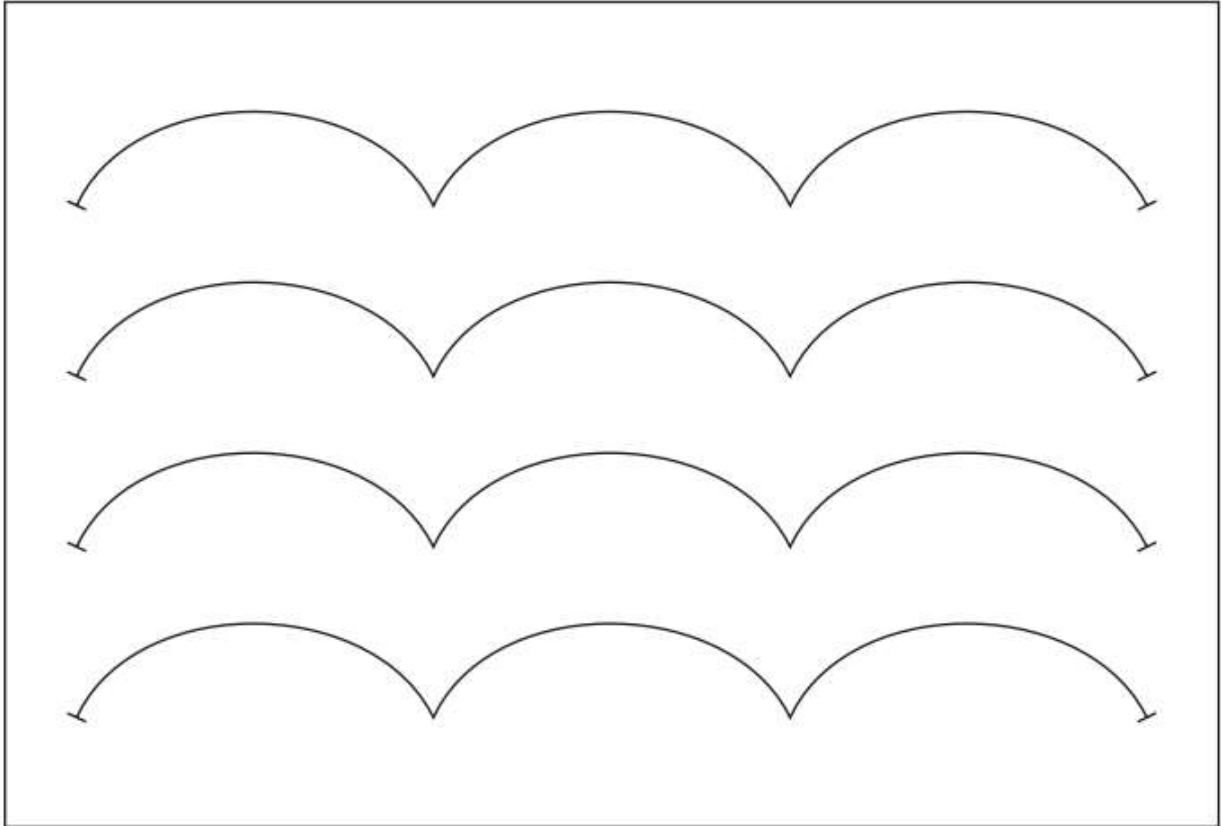
**Exercise 8**



MIX CURVE LINE CUTTING EXERCISE

LGGMT/L-01/M-02





<b>Exercise No. : 08</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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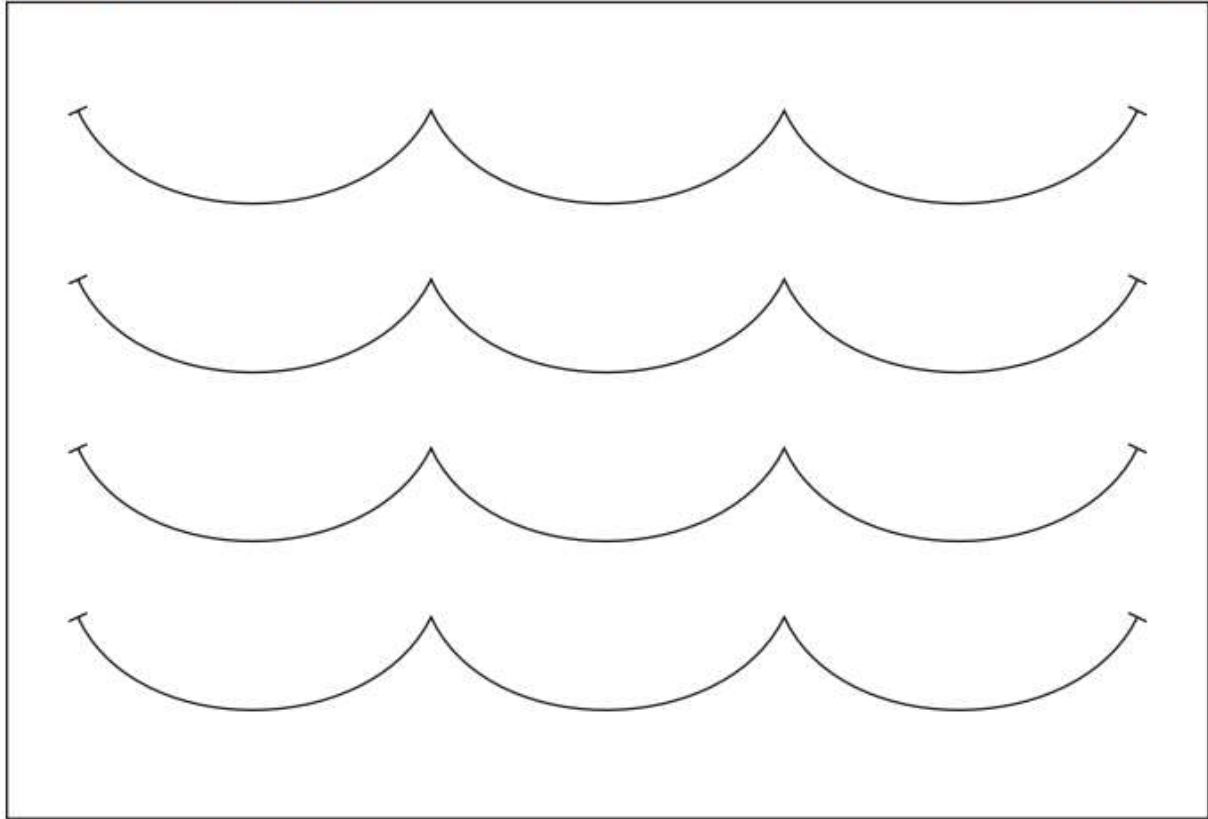
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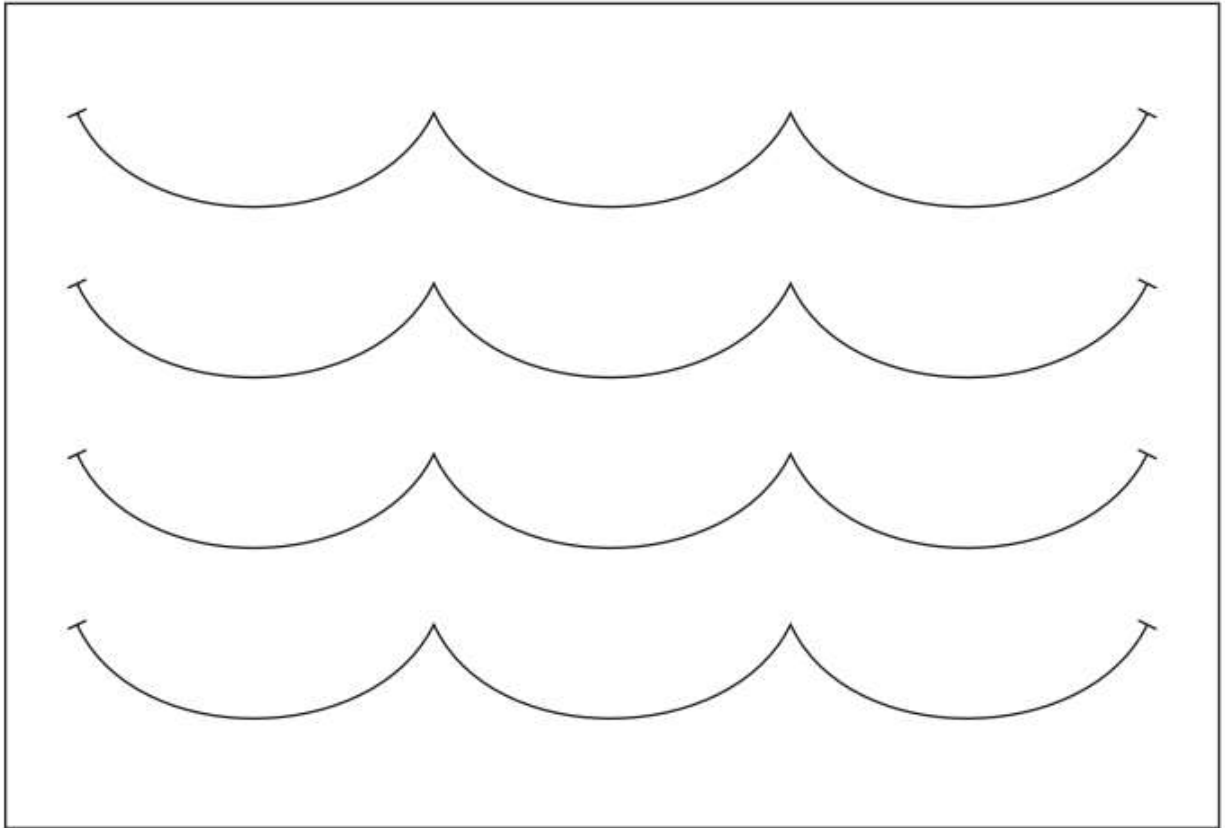
<b>IND BLG1</b>	Version:01	Page No.52
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**MIX CURVE LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





<b>Exercise No. : 09</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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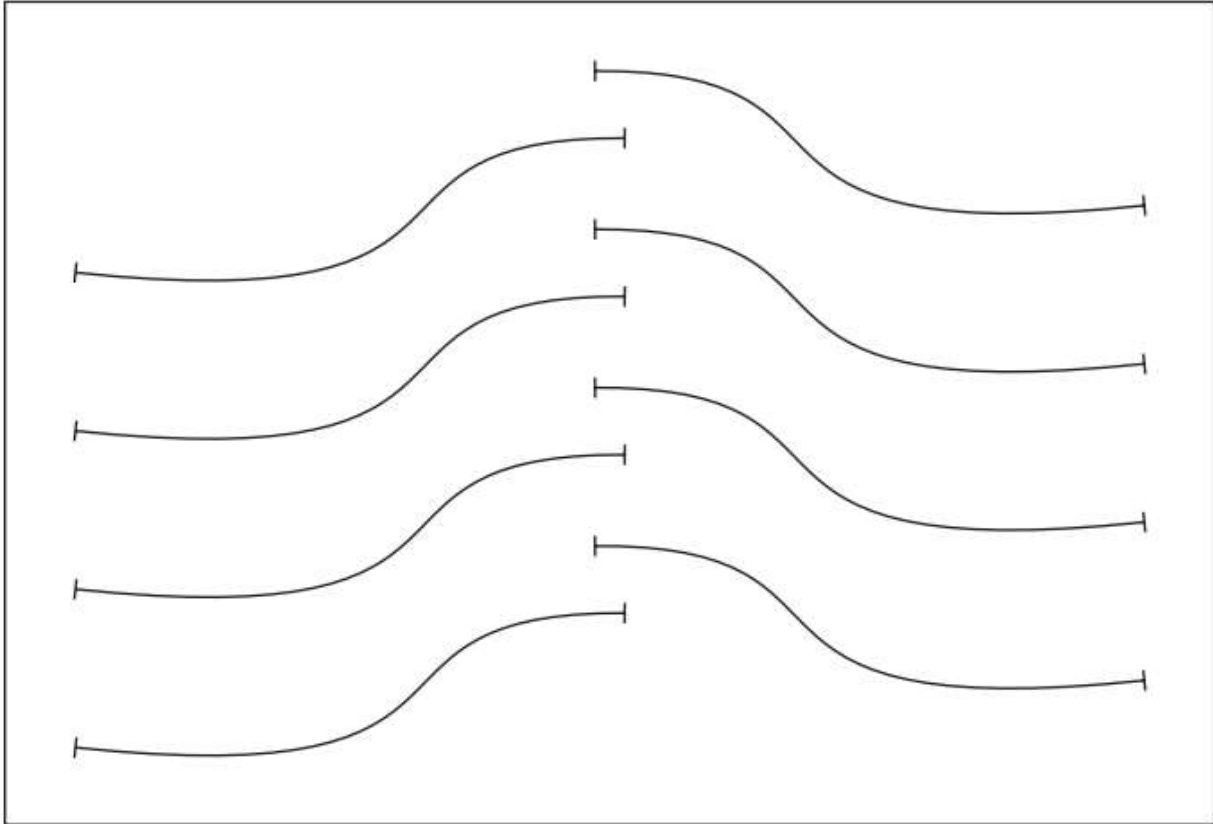
**Exercise 10:**

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MIX LINE CUTTING EXERCISE

LGGMT/L-01/M-02





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<b>Exercise No. : 10</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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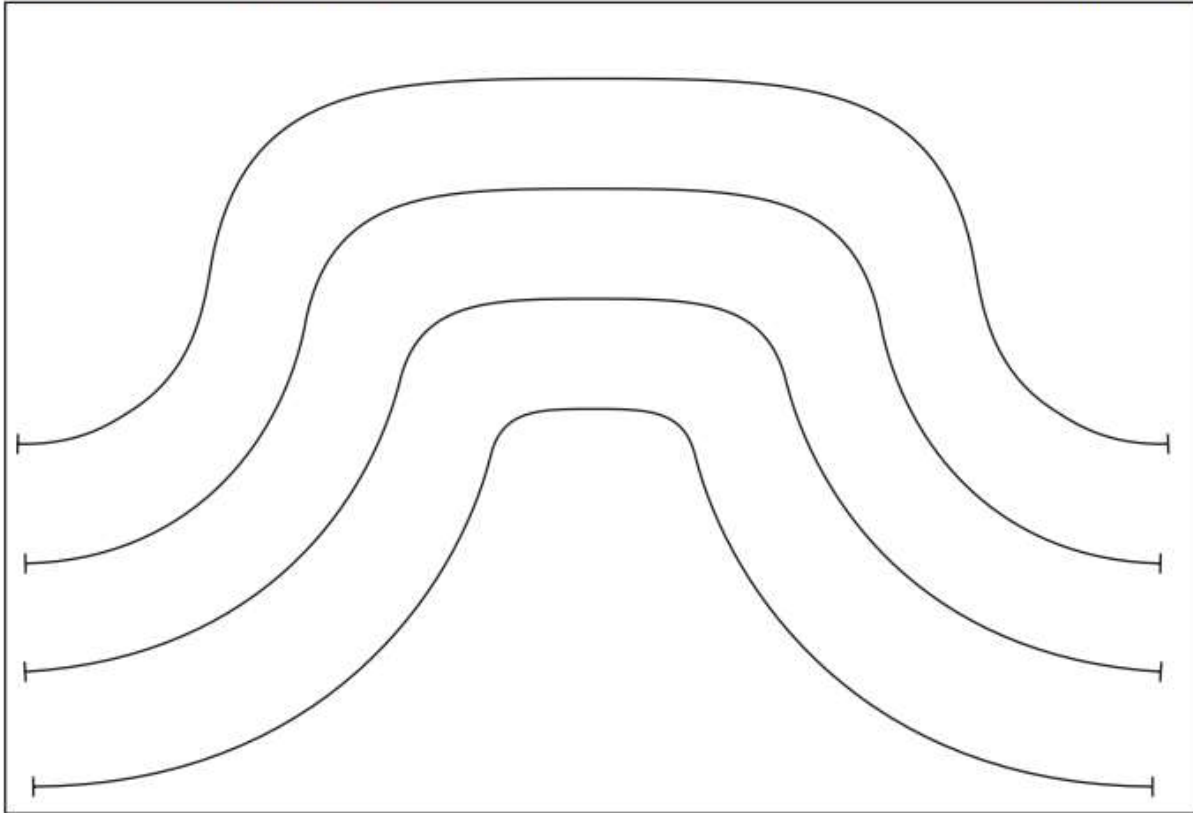
**Exercise 11**

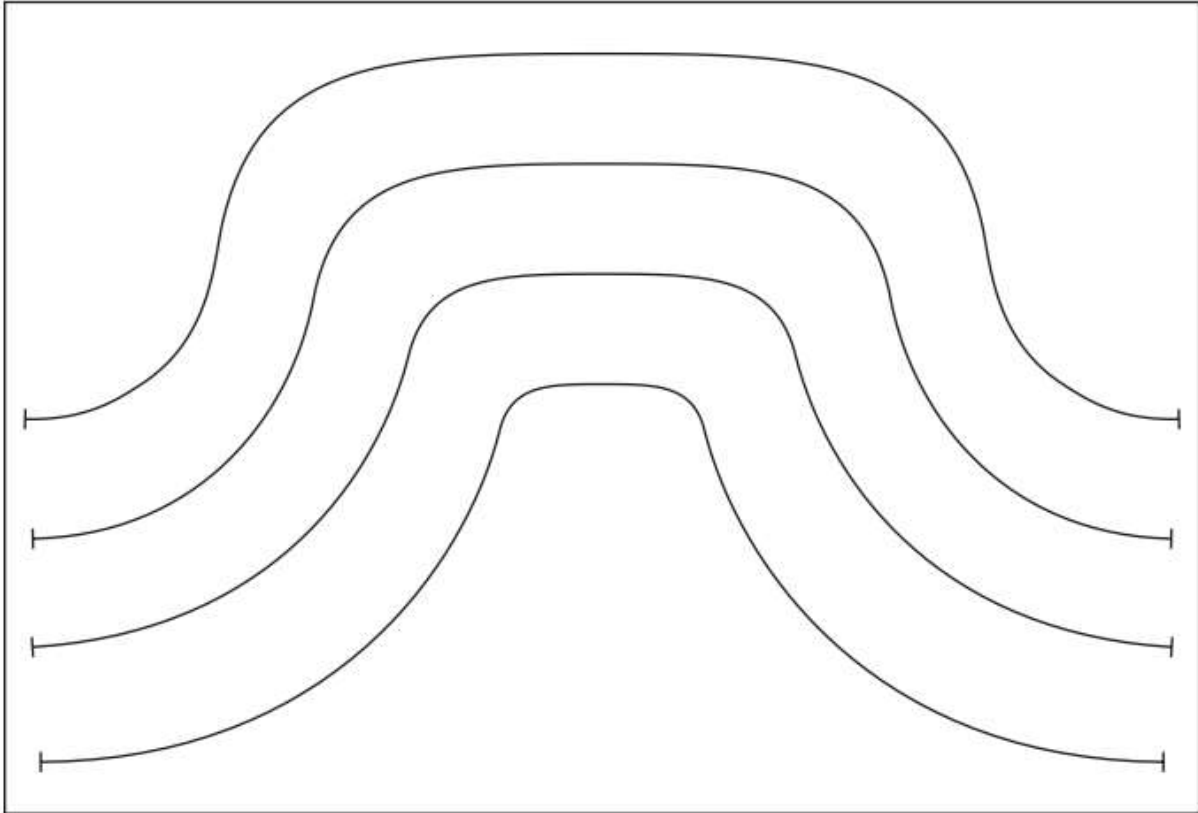




**MIX CURVE LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





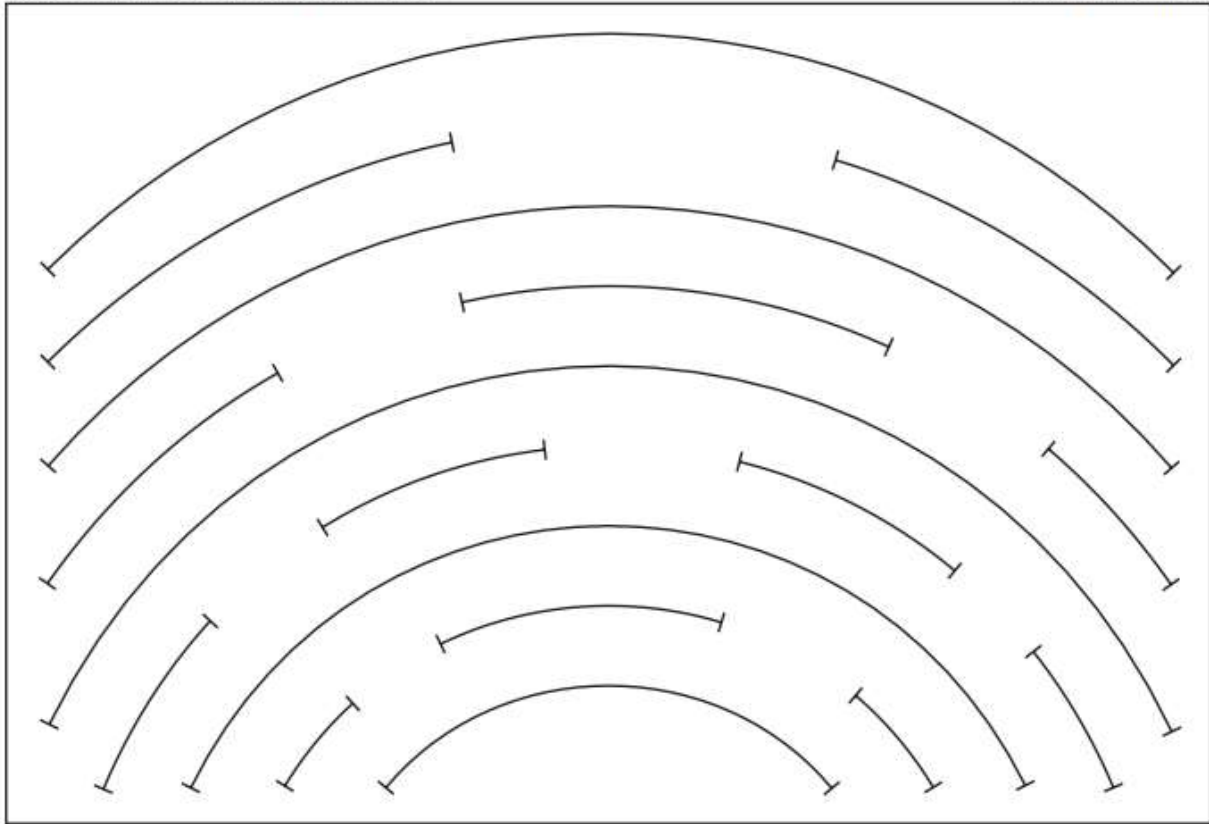
<b>Exercise No. : 11</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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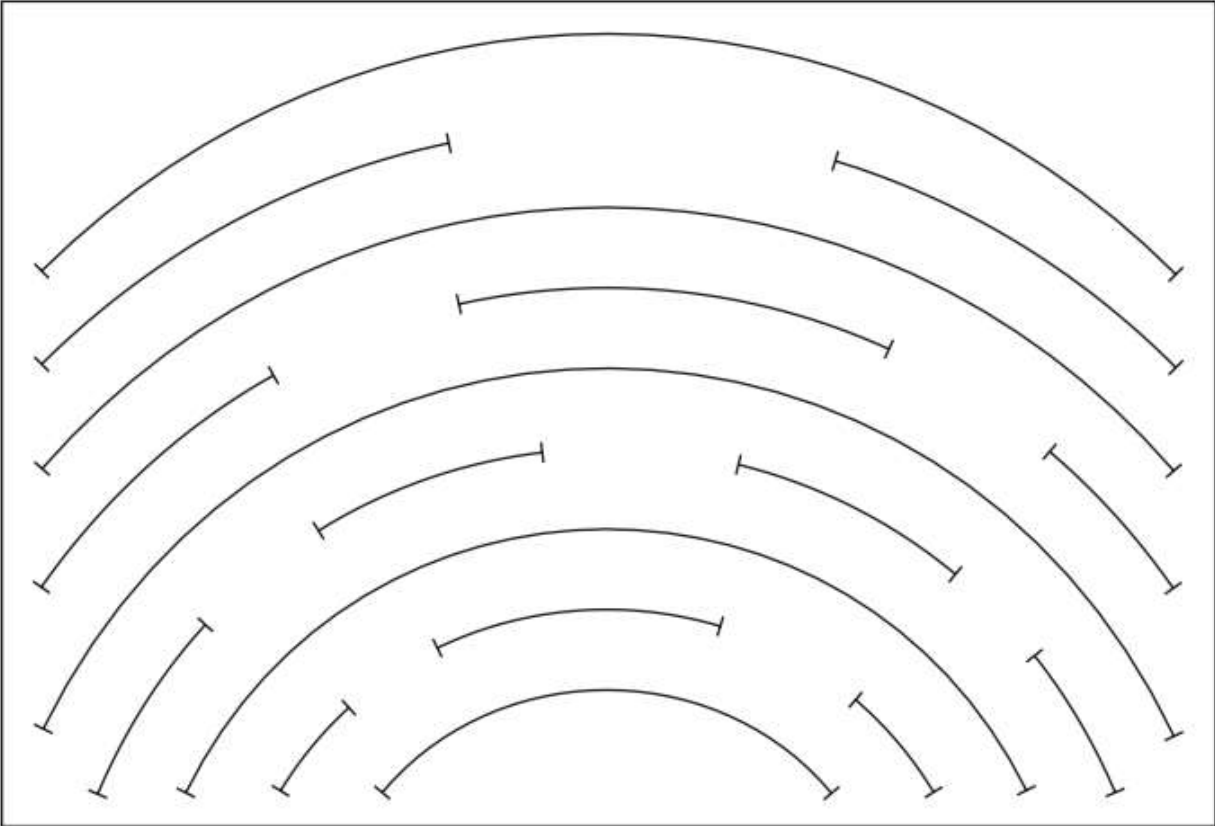
**Exercise 12:**



MIX CURVE LINE CUTTING EXERCISE

LGGMT/L-01/M-02





<b>Exercise No. : 12</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 13:**



**CONTINUES LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





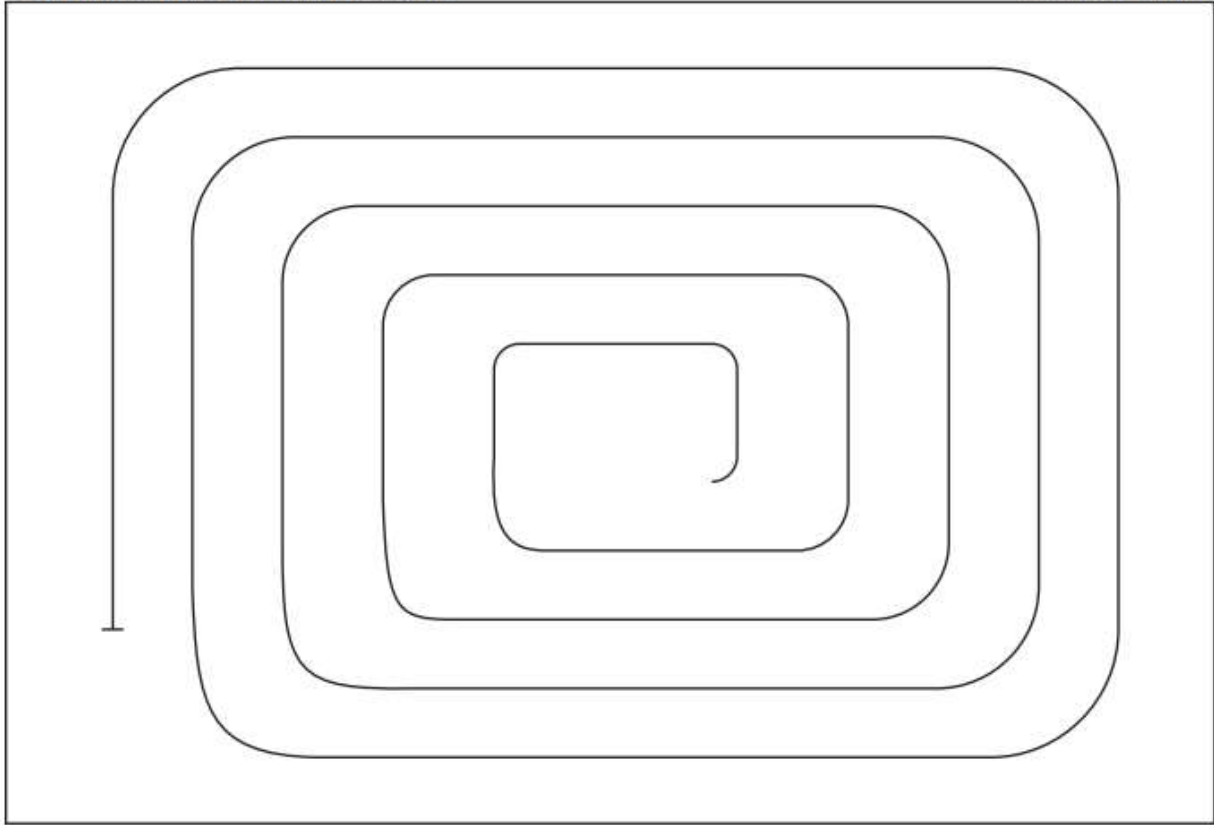
<b>Exercise No. : 13</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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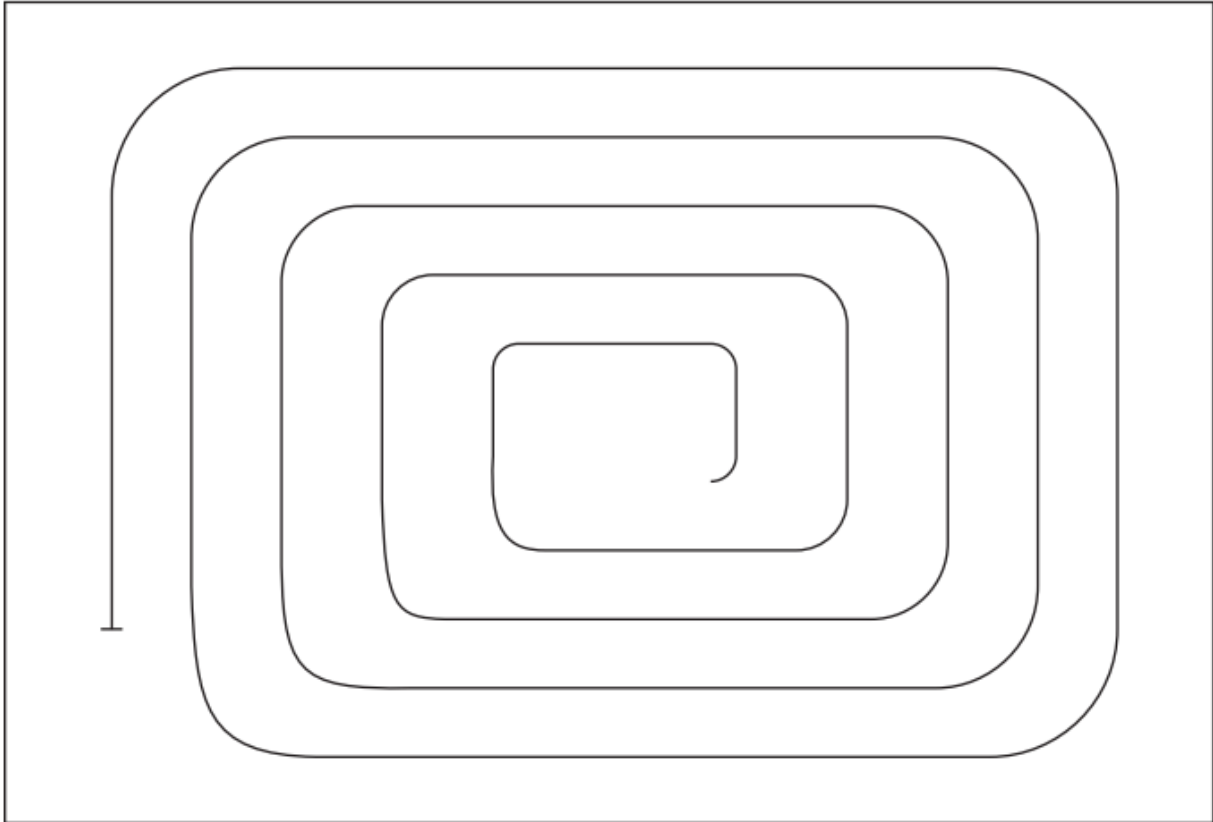
**Exercise 14:**



CONTINUES LINE CUTTING EXERCISE

LGGMT/L-01/M-02





<b>Exercise No. : 14</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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**Exercise 15:**

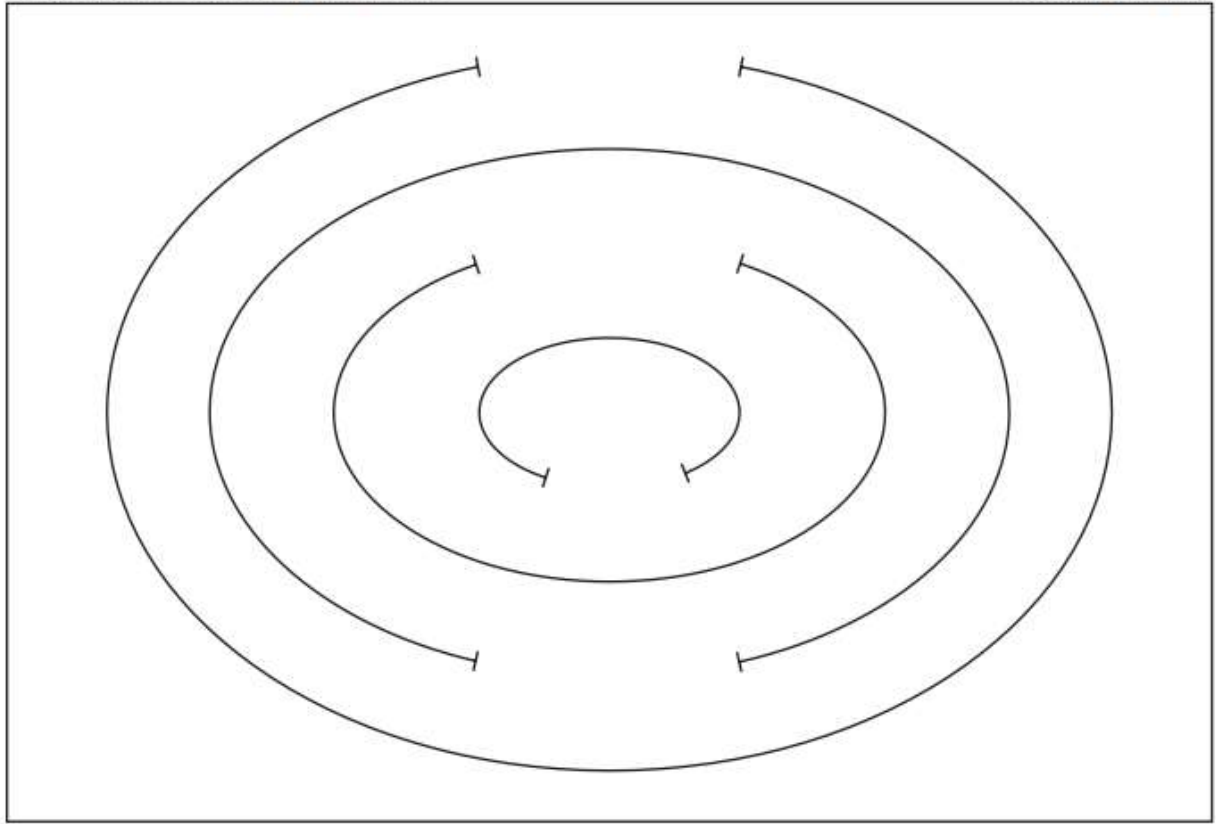
<b>IND BLG1</b>	Version:01	Page No.64
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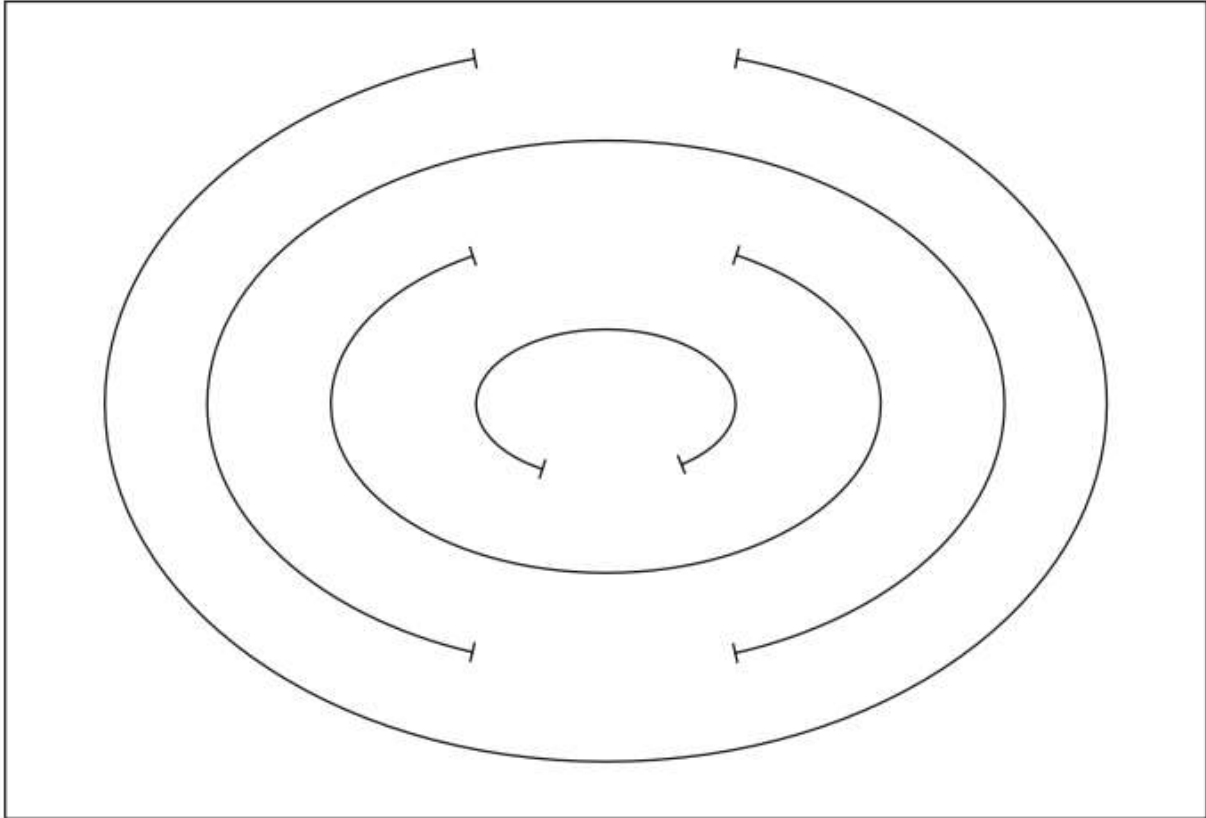




**CIRCULAR LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





<b>Exercise No. : 15</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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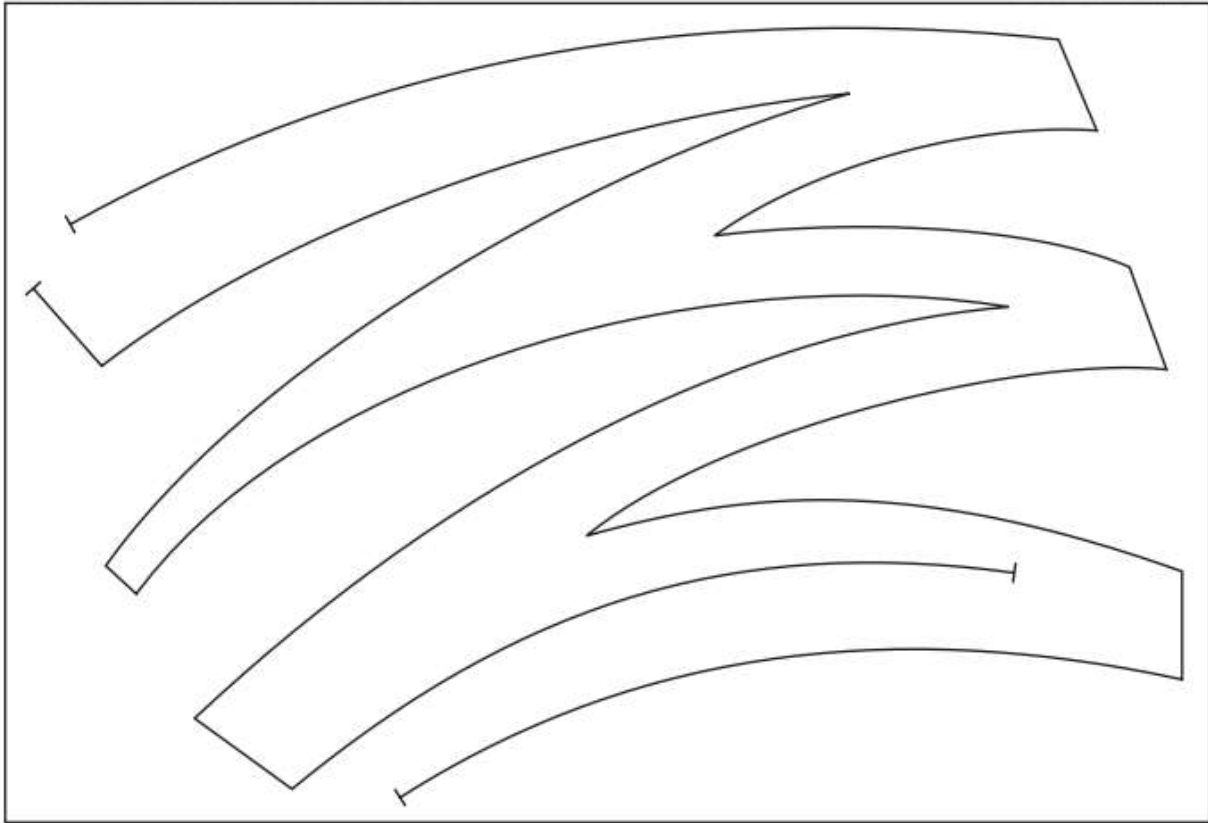
**Exercise 16:**

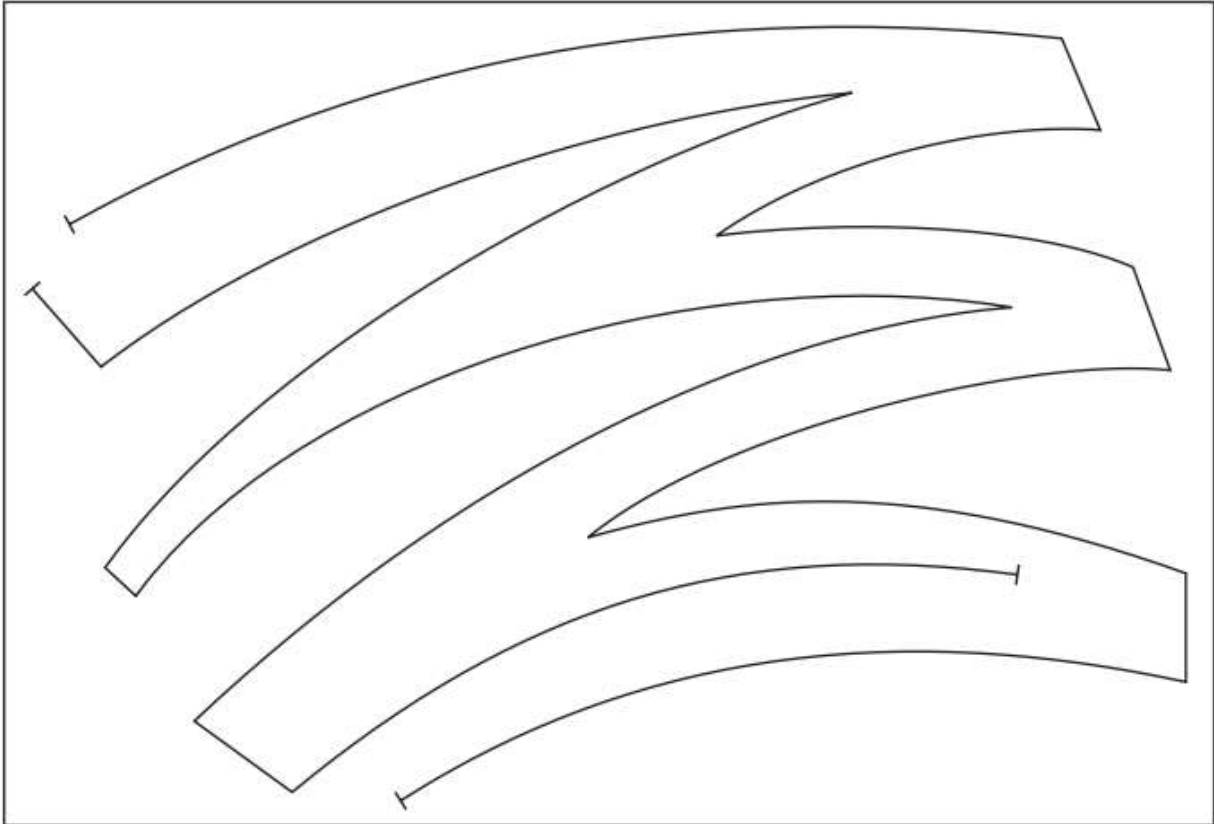
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**ANGULAR LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**





<b>Exercise No. : 16</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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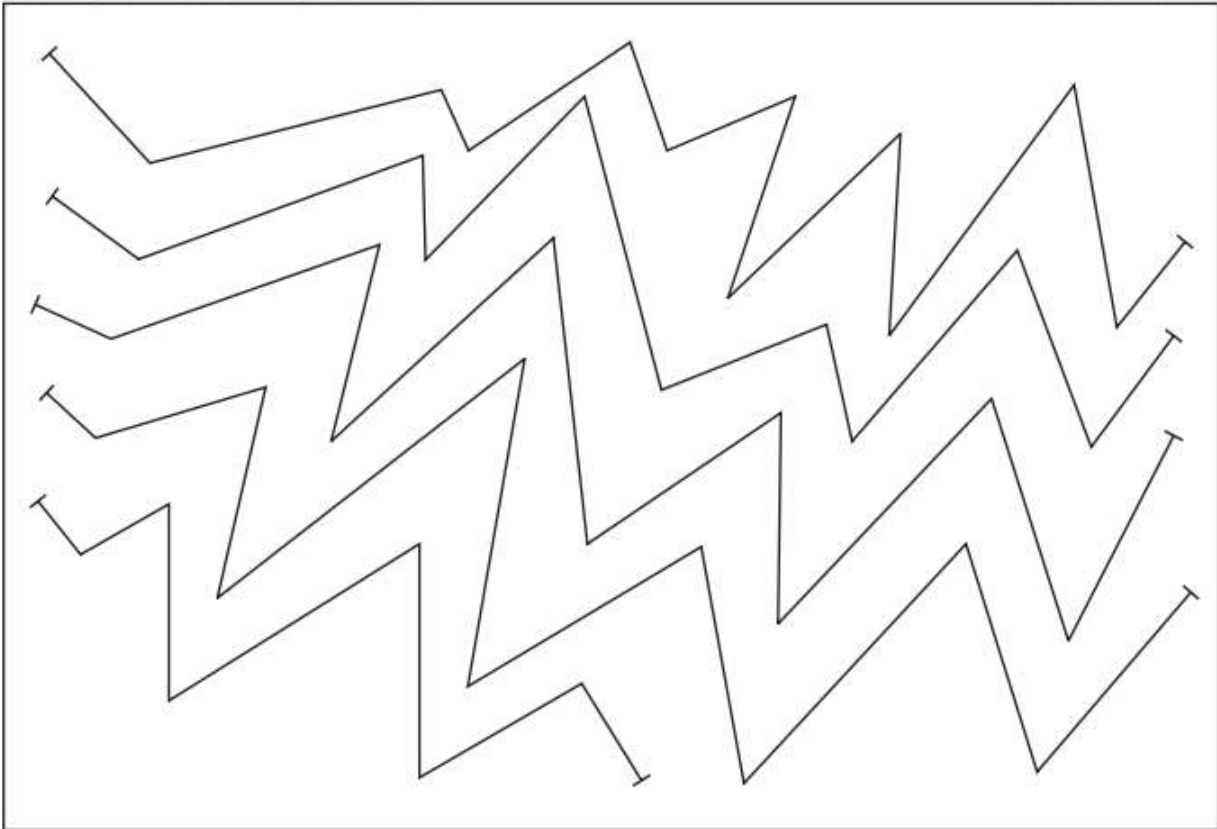
**Exercise 17:**

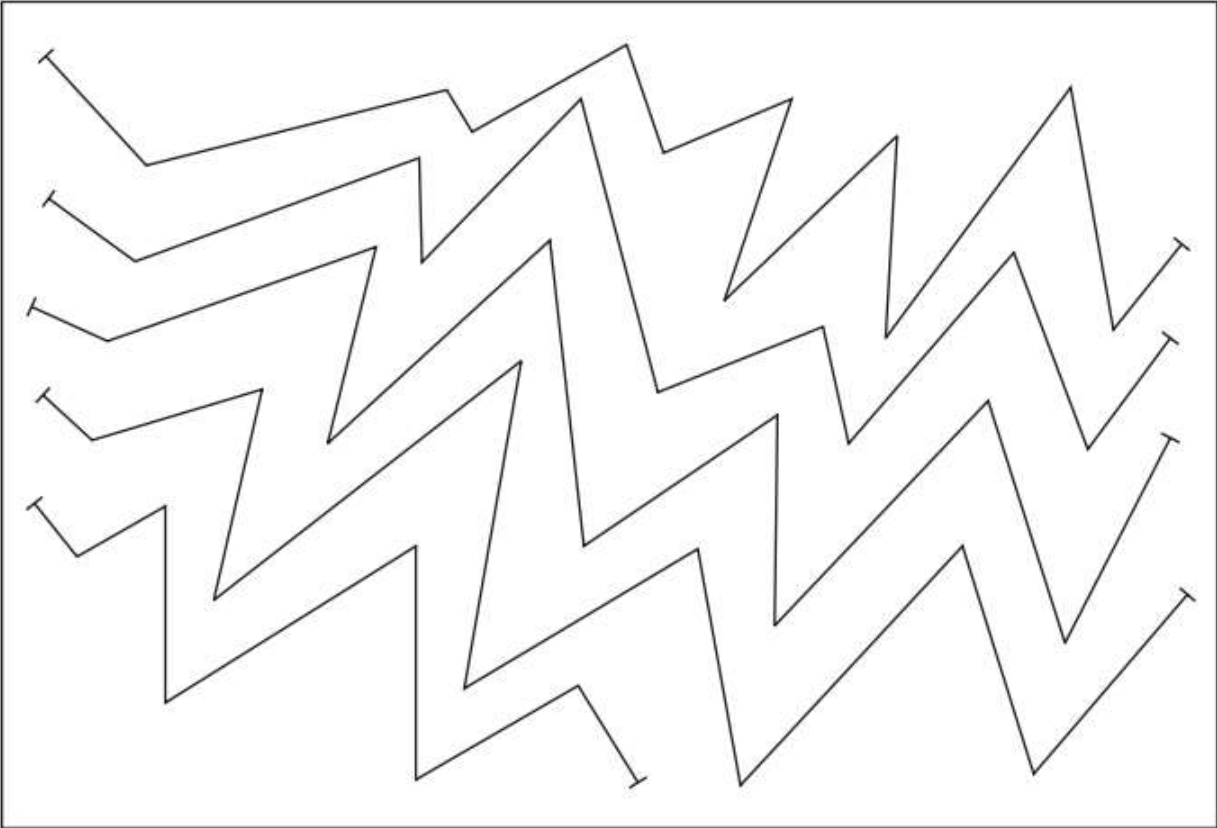
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**ANGULAR LINE CUTTING EXERCISE**

**LGGMT/L-01/M-02**



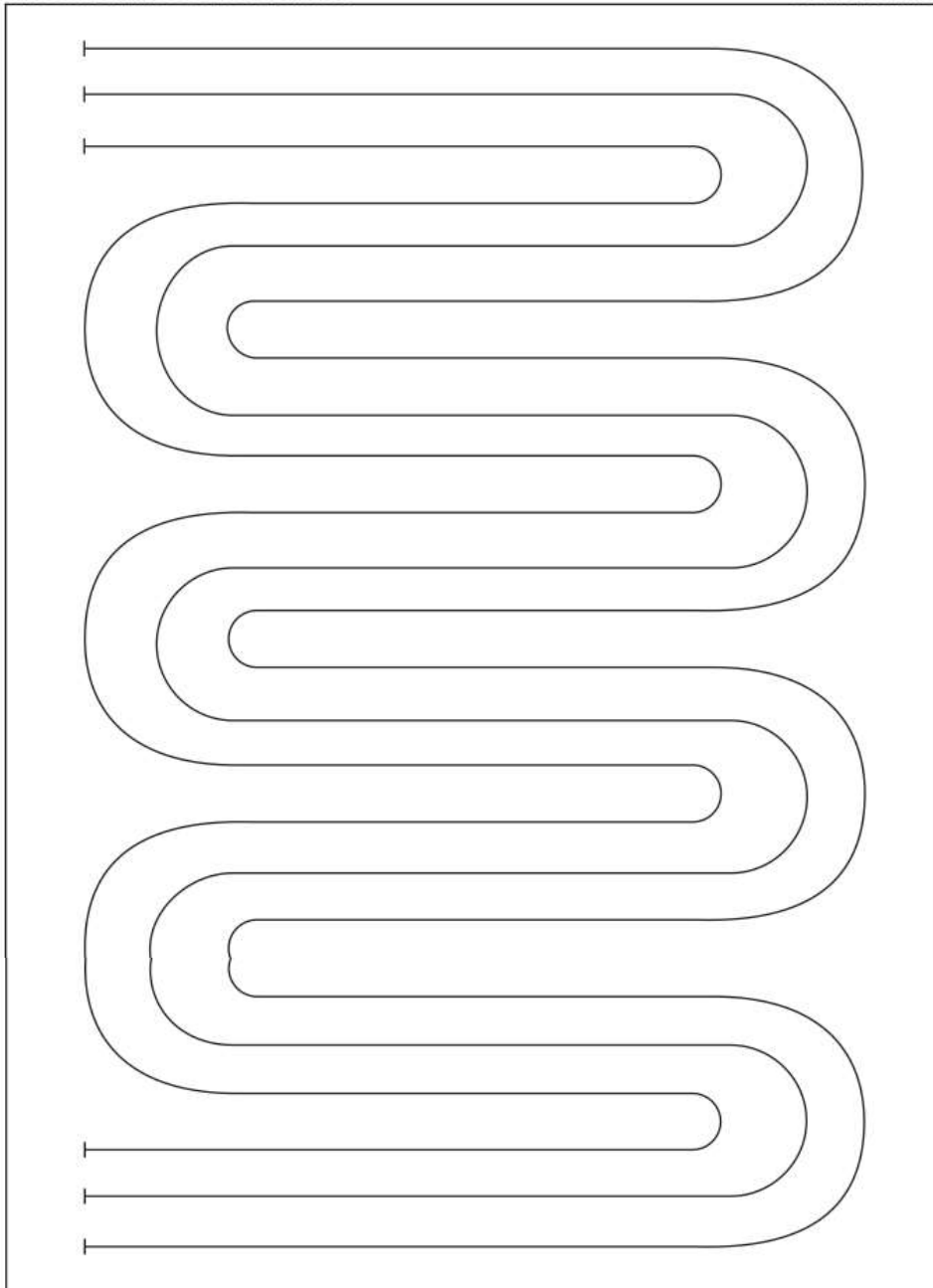


<b>Exercise No. : 17</b>	<b>Time:</b>	<b>Student:</b>	<b>Marks:</b>
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MIX CURVE LINE CUTTING EXERCISE

LGGMT/L-01/M-02



Exercise No. : 18	Time:	Student:	Marks:
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<b>LAP Test</b>	<b>Practical Demonstration</b>
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

**Instructions:** based on the practice that you have made on how to hold your cutter/knife on the paper exercises

**Task 1:** perform paper cutting exercises from No.1- No.18

<b>Operation Sheet 4</b>	<b>Cleaning and making ready to use cutting board</b>
--------------------------	-------------------------------------------------------

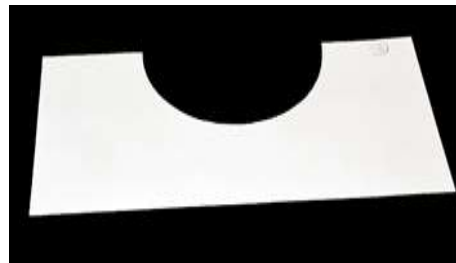
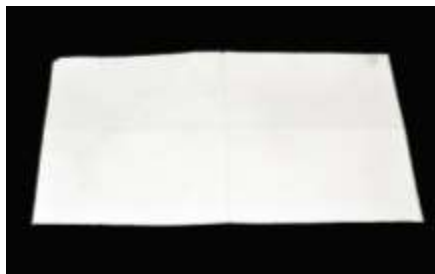
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Under this operation sheet, 2 different component cutting exercises are to be performed.

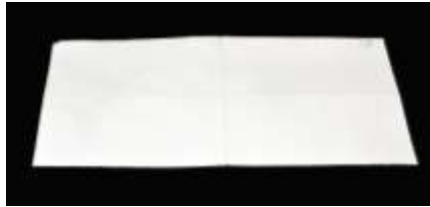
**Exercise1 - Gray Board Components:** the following components are designed to enable you cut the combination of different lines and curves: under this exercise, you are expected to cut 5 pieces of each component, the total will be 25 gray board components. However, if your performance is poor you are expected to cut more pieces. It is estimated that this exercise will take an hour with an approximate consumption of 3 sheets of gray board.



### **Exercise 2 - Synthetic Components:**

Through the following patterns of components a student is expected to cut components of synthetic based on the numbers written on the pattern. Total number of synthetic components will be 95. The estimated time would be 13 hours.

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<b>LAP Test</b>	<b>Practical Demonstration</b>
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

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**Instructions:** based on the practice that you have made on how to hold your cutter/knife on the paper exercises

**Task 1:** perform gray board component cutting (exercise 1)

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## Instruction Sheet

## LG19: Asses Leather

**This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –**

- Selecting appropriate leather according to specified work
- Assessing leather defects and faults impacting in cutting
- Assessing and sorting leather with requirement of job and pattern pieces

**This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –**

- Appropriate leather is selected according to specified work.
- The leather is assessed for defects and faults that impact on cutting.
- Leather is assessed and sorted to comply with requirements of different jobs and pattern pieces

### **Learning Instructions:**

1. Read the specific objectives of this Learning Guide.
2. Follow all the instructions described.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1” on page 10.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions.
7. Accomplish the “Self-check 2” on page 14.

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8. Ask your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 2).
9. Submit your accomplished Self-check. This will form part of your training portfolio.
10. Do the “LAP test” on page 16 (if you are ready). Request your teacher to evaluate your performance and outputs. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advise you on additional work.
11. Read the information written in the “Information Sheets 3”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
12. Accomplish the “Self-check 3” on page 20
13. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 3). If satisfactory you can proceed to Learning Guide #20.



<b>Information Sheet-1</b>	<b>Selecting appropriate leather according to specified work</b>
----------------------------	------------------------------------------------------------------

### Assessing leather

#### Selecting appropriate leather according to specified work

In selecting leather one should have to know

- What will be made
- What techniques will be used
- What are the dimensions
- What thickness is required
- Will the leather be dyed or natural
- How are parts to be joined by glue, sewing, lacing...etc.
- Is the necessary equipment available and so on

### Characteristics of leathers

Each type of leather is suited to a range of uses, according to its unique characteristics choosing the right one for the job is easy, once you know what to look for. Leather is tanned and finished on the grain side to have a smooth rich surface. Leather, which is tanned and finished on the flesh side, is called suede. Various types of finished leathers, which are used for making leather products, are described below:

**Buff hides:** are hides from buffalo it is thick, strong and durable. Buff uppers are finished in a few shades. They are used for making heavy and luggage leather goods.



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**Cowhides:** cowhides are thick, strong and durable. They have smooth grain surface. Cowhides are finished in different colors with different techniques and are used for making a wide range of leather goods. Most commonly used finished cow hides are;

**Cow dry-milled uppers:** are tanned with characteristic grains, developed naturally. Technique of embossing using hydraulic embossing press is also applied to get characteristic grains. They are used for making heavy, medium and small leather goods.



Since we'll be working with chrome tanned leather and there are so many different kinds, it will be useful for you to know a little more about some of the most common varieties.



**Garment Weight** leather is thin and supple enough to be sewn into clothing. Usually between 1 oz to 3 oz, and most commonly lamb, goat, pig, deerskin, or cowhide that

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has been thinned. It is most often sewn with a sewing machine, not worked by hand. We will not be using garment weight leather in this class.



**Upholstery** leather is mostly used on furniture but is also a good choice for accessories and heavy duty leather clothing. Thicker and more durable than garment weight, but can still be sewn with industrial sewing machines. Usually cowhide between 3 oz and 4 oz. A good choice for the bag project in this class.



**Latigo** leather is much stiffer than upholstery leather and is usually used for belts, straps harnesses, etc. Latigo is combination tanned, first chrome, and then veg tanned. It is available anywhere from 4-10 oz. A thinner latigo is a good choice for the wallet project in this class.

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**Suede** is leather which has been textured to be soft and "fuzzy" on both sides instead of having a distinct grain and flesh side. Suede is usually garment weight, around 1 to 4 oz, and is mostly used for clothing and footwear.



**Embossed or Printed** leather has been stamped to create an overall texture effect like an artificial reptile hide. Often finished with a very artificial, almost plastic looking coating, but can also be textured veg tanned leather. Usually fairly stiff for its weight which makes it great for [sculptural projects](#), or for the wallet project in this class.



**Metallic** leather has been embossed with a metallic foil grain to give it a very shiny,

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metal-like, appearance. Metallic leather comes in all kinds of weights, and can add a very unique look to leather projects.

**Patent leather:** is a type of [japanned leather](#) (tanned with a heavy black lacquer) that has been given a high gloss, shiny finish. Characterized by a glass-like finish that catches the light, patent leather is typically solid black. Patent leather may also come in several colors such as neutral tan, white, black or even neon colors such as neon-green and hot-pink. In addition to the mirror-like finish, patent leather is also virtually waterproof, while still retaining a very flexible texture. The visual aspects of patent leather have made it a sought-after material for formal accessories.



**N.B:** a hide is the upper most natural covering of big animal having an average size of 6 ft<sup>2</sup> and above while a skin is the upper most natural covering of small animals having an average size of 4-6ft<sup>2</sup>

## **Skins**

### **Buffalo/cow calf skins**

Calf skin is the term generally used to describe an animal in suckling stage. Dyed calfskins are very rich in appearance and have a soft smooth satin-like finish (weave that typically has a glossy surface). These skins are used for making small and sophisticated leather goods.

### **Goat skins**

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These are strong, durable soft skins. Their fibers are short and compact. Naturally finished goat skins are used for making leather goods with carving, tooling and embossing works. Most commonly used finished goat skins are;

**Goat uppers:** are tanned with smooth and bright glossy finish. Glaze kids are generally used for making novelty goods.

**Morocco leathers:** are fine and lovely finished goat skins. They are thin by long wearing and come in a limited number of colors and are especially known for its rich red hue.

**Sheep skins:** have a smooth grain and its strength properties are less as compared to goatskins. Sheepskins are good starting materials for making softy types of leather goods, particularly, ladies handbags, wallets, etc. they can be made as Napa or suede.

### **Exotic skins**

Exotic skins are skins which are rare, and very costly leathers. They are skins of reptiles such as crocodiles, alligators, lizards, cobras, pythons etc.



<b>Self-Check 1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- 1- What is the necessary information that a person should know before cutting? (3 pts.)
- 2- What is the difference between buff hide and cow hide? (3 pts.)
- 3- Explain the difference between cows dry milled and cow Napa leather? (3pts.)
- 4- Discuss about skin and hide and mention some examples? (3 pts.)
- 5- What makes exotic skin different from skin/hide? (3 pts.)

**Note: Satisfactory rating - 15 points                      Unsatisfactory - below 15 points**

You can ask your teacher for the copy of the correct answers

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## Answer Sheet

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

1. \_\_\_\_\_

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2. \_\_\_\_\_

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3. \_\_\_\_\_

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4. \_\_\_\_\_

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5. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## Information Sheet-2

## Assessing leather defects and faults impacting in cutting

### 2.1 Assessments of defects

We often find a number of defects in hides and skins caused by various reasons. The damages could be avoided or minimized by the exercise of reasonable care and foresight. These defects occur during the lifetime of the animal as well as after the death of the animal.

#### ANT-MORTEM DEFECTS:

These are defects occurring during the life time of the animal we can find two categories i.e. defects/damages carried by parasite, fungal and viral diseases and defects/damages caused by mechanical means.

##### a- Defects/damages occurred by parasite, fungal and viral diseases

- 1- **Baldness:** is a defect seen in the regions where the bacteria are in or molds (fungi) affected the skin.
- 2- **Anthrax:** an infectious disease of animals that will cause a defect on the skin/hide.
- 3- **Tick:** a parasite which suck blood from animals. It is usually found on the inner parts of the thigh and elbow capable of making small holes in the hides by biting.
- 4- **Leaches:** are usually found on the surface of water. They attack the animals around the rumps and down the bellies and near the fore legs, when the animals are immersing in water pool/pond.
- 5- **Pox:** Viral diseases that usually appear on the skin as a red spot and turn out in to small blisters and latter grow in to a bigger size.
- 6- **Warble fly:** are fully like insects which attack the cattle and cause damages to the hides forming holes.

##### b- Damages/defects caused by mechanical means

- 1- **Brand marks:** are generally made for the identification of the animals.



- 2- **Yoke marks:** are the patches of hardened skin on the shoulder of the animal caused by the pressure and rubbing of the yoke against the hide during plugging and pulling carts.
- 3- **Scratches:** are very common type of damages caused by thorns, bar bed wires and horns.
- 4- **Bruises:** found on the hip and shoulder areas due to crowding, bumping and rushing of animals sometimes caused by caning or whipping the animals.

In addition to the above defects many hides are very poor in substances because of nutrition's and old age of the animal. A large number of cattle are allowed to linger on till they die of sheer old age. The hides of such animals are loose and lack in proper substance.

#### **POST – MORTEM DEFECTS:**

Are defects or damages occurring after the death of the animal such as:-

- 1- **Abrasion:** are caused to the hide or skin by dragging the animal or the carcass over the rough ground.
- 2- **Fly cuts:** occur due to careless flying or using improper tool for flaying.
- 3- **Autolysis:** when the hide or skin is removed from the animal an enzymatic degradation (self-digestion) will take place which is called autolysis. To avoid this, curing is to be done immediately after removing the hide or skin from the animal and it only slows the rate of autolysis.
- 4- **Hair slips:** caused by degeneration of either by autolysis or bacterial action before cutting or during storage.
- 5- **Grain crankiness:** in the flaying operation sometimes blunt edged hammers are used to pound the hides to remove easily from the carcass which causes the grain creakiness.
- 6- **Vulture mark:** when the fallen animals are left lying in the field for a long time vulture prey up on carcass puncturing the hide with sharp calves. By these punctures, the hides get damaged and reduce their value.

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<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- 1- Discuss about the two types of defects? (5pts.)
- 2- Discuss about the two types of ant-mortem defects? (5pts.)
- 3- What is meant by carcass? (3pts.)
- 4- Explain about autolysis? (2pts.)

**Note: Satisfactory rating - 15 points                      Unsatisfactory - below 15 points**  
You can ask your teacher for the copy of the correct answers

<b>Answer Sheet</b>		Score = _____
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Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Short Answer Questions

1. \_\_\_\_\_  
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2. \_\_\_\_\_  
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3. \_\_\_\_\_  
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4. \_\_\_\_\_  
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<b>LAP Test</b>	<b>Practical Demonstration</b>
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Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time started: \_\_\_\_\_ Time finished: \_\_\_\_\_

**Instructions:** based on the demonstration that you have seen

**Task 1:** identify all the types of leather that you are going to visit from the workshop, collect some from different tanneries and demonstrate in your class based on your teacher's instruction.

**Task 2:** identify the defects and discuss.

<b>Information Sheet-3</b>	<b>Assessing and sorting leather with requirement of job and pattern pieces</b>
----------------------------	---------------------------------------------------------------------------------

Leather is not technically a fabric but a material. The quality of a leather piece mainly depends on what type of "grain" it has.

**Full- grain** leather is generally considered the highest-quality type and refers to leather that has not been sanded, buffed or corrected to retain the skin's natural fiber strength and durability.



**Top-grain** (also called corrected grain) and split grain leather have been more heavily processed (the top layer of the skin is usually removed), and are therefore not as durable as full grain leather, and also won't develop that coveted natural patina of high-quality leather over time. One way to check whether a leather item was made from full-grain leather is to look closely at the tiny grains on the fabric. Do they look natural or printed?

Full-grain leather contains all the natural imperfections from the animal it came from. Brands that use corrected leather will sometimes print marks back on to the sanded leather, to add authenticity. Some more notes on leather quality:

A major downside of leather is that it can be permanently creased. When you buy a new piece, make sure it does not already have any scratch marks. On unworn pieces those usually signify that the leather is either brittle or very high maintenance.

Check how the individual pieces of leather are attached.

Were they sewn together or glued?

Stitching takes longer than gluing and is therefore more expensive for brands, but it creates a stronger hold between the pieces. Any visible remains of glue are a definite no-go. A great alternative to real leather is faux (or vegan) leather, which usually consists of a polyurethane coating on a fibrous layer. High-quality faux leather can be just as durable as real leather, is generally more affordable, easier to maintain, won't lighten as much in the sun - and doesn't involve the death of animals.

Just like real leather, faux leather should feel as supple as possible, not have any obvious scratch marks and the individual parts of the item should be sewn, rather than glued together. Low-quality faux leather will often have an obvious plastic-y, shiny look to it, higher quality pieces are almost indistinguishable from animal leather, at least to non-experts. So: Avoid shiny, go for soft and supple and, when in doubt, thicker tends to be better. Faux leather can be lightweight, but it should never feel thin or flimsy.

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<b>Self-Check 3</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. The quality of leather mainly depends on \_\_\_\_\_  
(3point)
2. What is the difference between full grain and top grain leather? (7 point)

**Note: Satisfactory rating – 10 points                      Unsatisfactory - below 10 points**  
You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_



<b>Instruction Sheet</b>
--------------------------

<b>LG20: Cut Leather by Hand</b>
----------------------------------

**This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –**

- Cutting patterns using cutting knives to cut material
- Identification of leather defects and fault area of high quality leather
- Identifying pattern positioning to allow for identified flaws

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- Using cutting techniques to match pattern shape size and leather quality
- Cutting precisely color matching pieces
- Identification of leather problems or faults with the pattern, knives and cutting board
- Carrying work according to OHS practices

**This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –**

- Cutting knives and patterns are used to cut materials.
- Defects and fault areas of high-quality leather are identified and patterns are positioned accordingly.
- Patterns are positioned to allow for identified flaws, nap of suede or other grain or print characteristics of leather.
- Cutting techniques are used to match pattern shape, size and leather quality.
- Pieces are cut precisely to size and color matched.
- Problems or faults with patterns, knives and cutting boards are identified and referred for repair
- Work is carried out according to OHS practices

### **Learning Instructions:**

14. Read the specific objectives of this Learning Guide.

15. Follow all the instructions described.

16. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.

17. Accomplish the “Self-check 1” on page 9.

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18. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 1).
19. If you earned a satisfactory evaluation proceed to “Information Sheets 2 & 3”. However, if your rating is unsatisfactory, see your teacher for further instructions.
20. Accomplish the “Self-checks 2 & 3” on pages 14 & 17.
21. Ask your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-checks).
22. If you earned a satisfactory evaluation proceed to “Information Sheets 4”. However, if your rating is unsatisfactory, see your teacher for further instructions.
23. Read the information written in the “Information Sheets 4”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
24. Accomplish the “Self-check 4” on page 22.
25. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 4).
26. If you earned a satisfactory evaluation proceed to “Information Sheets 5”. However, if your rating is unsatisfactory, see your teacher for further instructions.
27. Read the information written in the “Information Sheets 5”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
28. Accomplish the “Self-check 5” on page 29.
29. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 5).





30. If you earned a satisfactory evaluation proceed to “Information Sheets 6”. However, if your rating is unsatisfactory, see your teacher for further instructions.
31. Read the information written in the “Information Sheets 6”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
32. Accomplish the “Self-check 6” on page 39.
33. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 6).
34. Your teacher will give you feedback and the evaluation will be either satisfactory or unsatisfactory. If unsatisfactory, go back to instruction 18. But if satisfactory, Submit your accomplished Self-check. This will form part of your training portfolio. Now you can proceed to Learning Guide #21.

<b>Information Sheet-1</b>	<b>Cutting patterns using cutting knives to cut material</b>
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Two must-have cutting tools for leather are a utility knife and a smaller hobby or craft knife.

**Additional common leather cutting tools include the following:**

- rotary cutters (think really sharp pizza cutter)
- Heavy-duty scissors.
- Head knives.
- Swivel knives.

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- Hole punches.
- Skiving knives.
- V-gouge knives.



**X-Acto Knife** - a cheap and easy to use leather cutting tool, great for details but not as good for cutting very thick leather. Make sure you have a lot of extra blades.



**Leather Shears** - I prefer these semi-serrated Olfa shears for cutting leather. They always stay sharp and are great for cutting out small patterns in thin to medium leather.





**Cutting Wheel** - a good way to cut long straight lines in leather when used with a metal ruler and a cutting board, not an essential tool, but great for cutting straps.



### How to Find the Best Leather Cutting Tools

The most critical aspect of any leather cutting tool is that it has to be effectively sharp. “A leather worker’s most dangerous tool is a DULL KNIFE. The more dull the knife, the more pressure you put down to cut through, and although that knife may be dull when cutting leather, pushing down hard on it will cut your fingers VERY WELL!” Dull leather cutting knives also don’t cut leather cleanly, leaving ugly, uneven jagged edges. Unless you purchase a burnishing machine, which finishes off those edges, expect to spend a good amount of time hand burnishing.

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It is critical then with metal-bladed cutting tools that you can either sharpen the blade frequently or replace it, as metal dulls quite quickly especially when used on tough materials like leather. How quickly?

Most smooth types of leather do not fray. However, certain types of suede leathers may fray or separate as they wear. Keeping suede leathers from fraying is fairly easy and will extend the life of leather garment and goods.

While you can definitely use scissors to cut leather, it's not ideal. On thick leather, you might not be able to cut it at all. And even if you do, you'll have to use more force than normal, which can cause jagged and squished edges.

### **What Is a Safe Cutting Tool?**

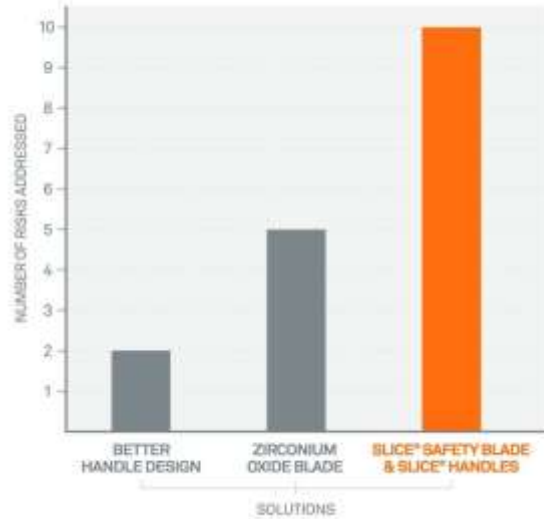
How much of the blade is exposed and has the potential to accidentally cut its user? While blade exposure is certainly important, it's not the only way to mitigate the risks of cutting tools. The only way to address blade exposure is to redesign the handle. This includes recessing the blade, creating a guard, or adding auto-retraction mechanisms to safety utility knives. These innovations are helpful, but they don't address some of the basic risks. After all, what cuts you: the handle or the blade?

Below is a breakdown of the risks posed by knives:

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other companies only offer partial solutions



- 10 MAIN RISKS FROM KNIVES**
- Blade too sharp or too dull = Laceration
  - Blade's oil coating = Chemical reaction
  - Non-ergonomic handle = Repetitive strain injury
  - Conductive blade = Damage to electrical components
  - Frequent blade replacement = Laceration
  - Chemically reactive blade = Damage to materials
  - Blade exposure between cuts = Laceration
  - Rusty blade = Chemical reaction, tetanus
  - Magnetic blade = Damage to materials
  - Blade maintenance required = Laceration

As you can see, only 20 percent of the risks associated with knives can be addressed by redesigning the handle. Slice addresses safety more comprehensively with the ceramic blades in our safe cutting tools.

<a href="#"><u>Self-Check 1</u></a>	<a href="#"><u>Written Test</u></a>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- [Explain way of finding best leather cutting tool.\(5 point\)](#)
- [List common Leather cutting tools. \(5 point\)](#)

**Note: Satisfactory rating - 10 points      Unsatisfactory - below 10 points**  
[You can ask your teacher for the copy of the correct answers](#)

**[Answer Sheet](#)**

Name: \_\_\_\_\_

**[Short Answer Questions](#)**

Score = _____	Date: _____
Rating: _____	

1. \_\_\_\_\_

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<b>Information Sheet-2</b>	<b>Identification of leather defects and fault area of high quality leather</b>
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### **Quality of the Leather**

Because of the variations in fiber density the portions of leather cut from the same skin show different characteristics. Therefore, portions cut from the same skin will be found to be different in:-

- Strength
- Flexibility
- Porosity and elasticity

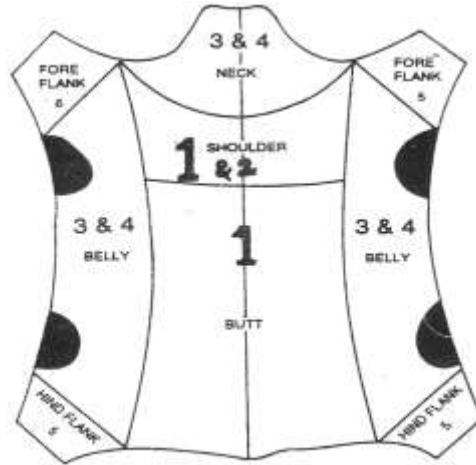
Every skin has different qualities on different portion of its surface.

The area of best quality of leather generally corresponds to those areas of best substance. However, other factors must be taken in to consideration as the quality of the leather.

- The proportion of prime material compared with the size of the skin.
- The regularity of the substance.
- The shape of the skin like, good square shape or narrow etc.
- The defect with the skin like, natural, mechanical and disease disfiguration which have occurred during the animal life.

### **Leather Quality Area & Parts**

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The substance and quality of different parts of leather are determined by the anatomy of the animal –

- 1) **Butt** – Is the strongest leather as this covers the delicate organs along the back, this is also most even in quality and texture and is the first quality.
- 2) **Shoulder** – Is the lighter substance which is the second best quality.
- 3) **Neck** – It is thick in substance and heavily lined with growth marks. This portion is the third best quality.
- 4) **Belly** – Is the poorest in quality, on the sides of the skin/hide lot of elasticity and stretchable. It has most defects than others and is uneven.
- 5) **Shank** – Is light of portion it is stretchy with wrinkles; it may or not be used based on its quality.

The type of animal skin, the age of the animal, the environment, the type of finish applied to the grain of the skin affects the degree of stretch and tightness within the skin. However all skins will be consistence in their direction of stretch and tightness. The lines of stretch run directly at right angles to the lines of tightness.

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### **Tension and stretch**

Hides usually are divided in to two parts along the portion of the spine from the neck to the tail for ease of landing and applying special finishes. The two parts are called sides (left and right side).the upper part of leather is called grain and the lower part is flesh. All skins/hides follow the same pattern in their direction of stretch and tightness. The lines of stretch run directly at right angles to the lines of tightness.

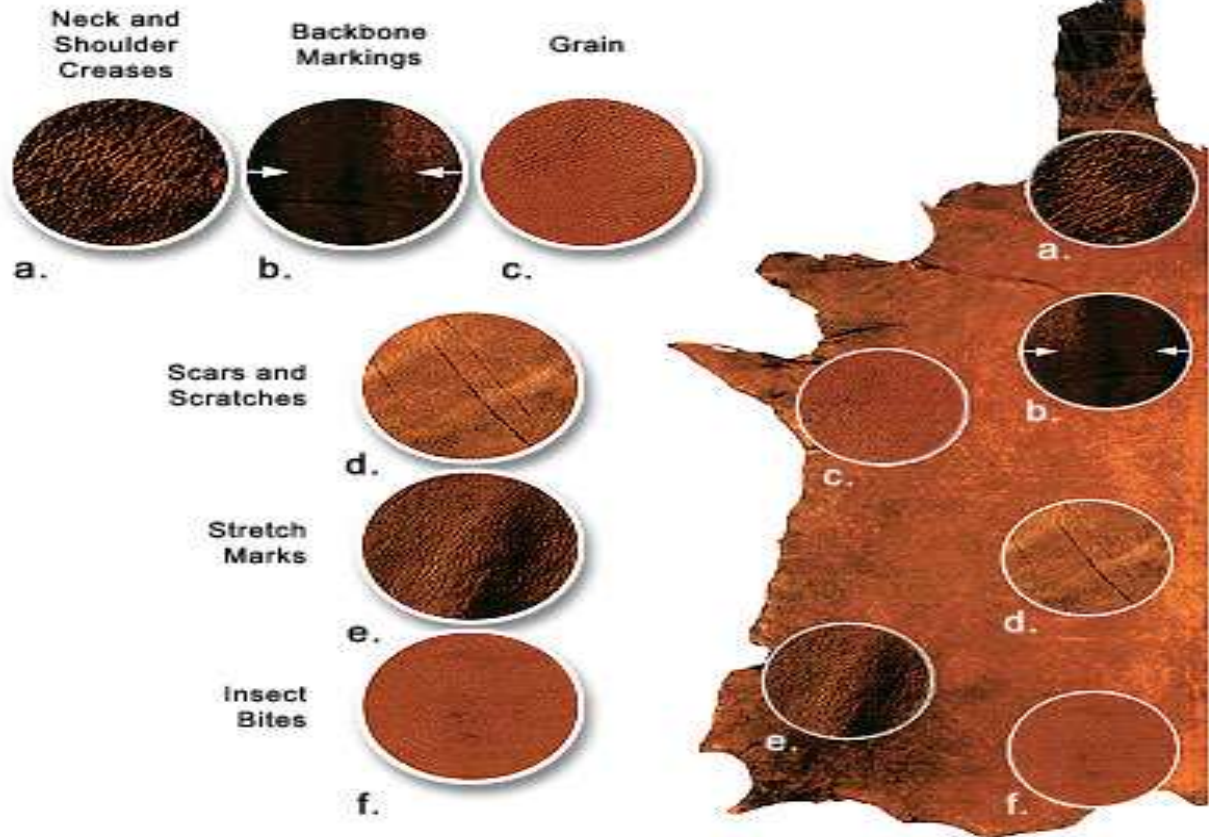
Causes of stretch:-

- Walking
- Breathing
- Moves of the head
- Nutrition & Gestation

### **Leather defects**

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<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discuss why components cut from the same leather show different characteristics? (5pts.)
2. Mention different parts of leather and explain? (5pts.)
3. What other factors affect the quality of leather? (5pts.)
4. Discuss about lines of stretch and tightness? (5 pts.)



**Note: Satisfactory rating - 20 points                      Unsatisfactory - below 20 points**  
You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____ Rating: _____
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Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-3</b>	<b>Identifying pattern positioning to allow for identified flaws</b>
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### **About your pattern (pattern positioning)**

- Use the pattern as a knife-guide. Keep the blade edge against the pattern at all times
- Your cutting movement with the knife should be as continuous as possible. Shorter cuts and several stops will give you irregular edges as the stop points
- Arrange your straight edge patterns in the way that straight lines fit against straight lines to have a minimum amount of waste.
- To minimize waste of curved edge patterns use the possibilities similar curved patterns
- Keep patterns 'square' to back bone line. Do not turn patterns to avoid defects as this will create more waste

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- Always keep a note of how many pieces are cut to make complete sets. Do not leave one pattern to last as good quality leather may be used for an unimportant piece.
- Work out small and large patterns together. Mix pattern shapes to get the best combination/utilization
- Always remember that you should reach the maximum quantity of parts at a consistent quality.

Your grain line is always parallel to the selvage. If your pattern piece should be lay lengthwise, crosswise or on the bias, the grain line will tell you (as well as the layout guide). Aid you in laying your pattern pieces on your fabric as straight as possible.

<b>Self-Check 3</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discuss about pattern positioning. (5 point)



**Note: Satisfactory rating – 5 points**

**Unsatisfactory - below 5 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-4</b>	<b>Cutting techniques, color matching and cutting precisely</b>
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### **Cutting Techniques**

Key points to be remembered during cutting:

- i) Make sure of correct patterns and markings.
- ii) Examine for defects size and shape of the skin.
- iii) Selective cutting must be practiced. The best part of the article demands the best part of the skin.
- iv) Visible part must have good grain surface and section covered could contain grain defects.
- v) Good cutting begins with a sharp knife. Less sharpened knife or blunt knife cuts the leather with ragged edges.
- vi) The angle between the edge of the knife and the cutting board depends of the hardness of the material being cut. A small angle for very soft materials like fabric and a greater angle for hard materials like leather and reinforcements.

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- vii) Over-cutting and under-cutting must be avoided.
- viii) Patterns must be placed in such a way to ensure quality, economy and minimum wastage.
- ix) Straight-line cutting must be done first with steel scale. Curved line cuttings or irregular shapes must be cut with templates.
- x) Cutting must be done on a smooth surface of softwood or galvanized iron plate or zinc plate for cutting accuracy.
- xi) Place the pattern on the leather and initiate cutting from left to right.
- xii) Start cutting from left top corner of the pattern and end at the right bottom corner.
- xiii) Use the least number of cutting strokes.
- xiv) Cut through the leather in one stroke.
- xv) Intermittent cutting must be avoided as it may damage the components.
- xvi) Place the patterns suitably on the leathers to achieve maximum cutting with least wastage.

#### Your material and technique

- The best part of the leather is used for cutting the greater proportion of large parts (patterns).
- Start to cut smaller parts after large parts are completed.
- Place several patterns on to the leather at the same time to get the best combination (reduce waste)
- Always plan two or three cuts ahead. Never cut without knowing where the next pattern will be placed.
- Always start cutting at the butt part of the leather and proceed along the backbone to the outward direction as much as the quality and substance of leather is suitable
- If you are cutting skin leather, start also at the butt and continue towards each side from the backbone to the shank until you reach the neck.
- If you find defects near the backbone, start cutting as close as possible to the defected portion and proceed towards the direction from the backbone to shank.

## 2.2 leather sorting

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Sorting leather before cutting will depend on the producer requirement according to the requirement according the required product quality and the type of leather needed for the design of the material. Mostly the sorting of leather can be as follows:-

### **Sorting by color**

This will help to group the same color shading from a bundle of leather and to have the same color shade in one model at the time of cutting for a product.

### **Sorting by size/area of leather**

This type of sorting will assist the proper utilization of material to use bigger patterns.

**Sorting by thickness:** - even though the thickness of the material can be split the sorting of leather by thickness will assist to use the thicker material for the required part. This is mostly important for leather garment.

**Sorting by texture of the grain:** - leather having similar texture will be sorted for the process needed. For example the texture could be corrected or full grain.

**Corrected grain leather:-** If you have seen leather that has an even grain and looks a bit like vinyl, then the chances are it has gone through this process. This type of leather is corrected grain.



**Full grain leather:** now full grain leather has had nothing done to alter the natural markings of the hide.

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<b>Self-Check 4</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discuss the cutting techniques that should be applied while cutting your material? (5pts.)
2. Discuss the techniques that should be applied while positioning your patterns? (5pts.)
3. What is the difference between corrected grain and full grain? (5pts.)
4. Discuss about color, thickness and size sorting? (5pts.)



**Note: Satisfactory rating - 20 points**

**Unsatisfactory - below 20 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-5</b>	<b>Identification of leather problems or faults with the pattern, knives and cutting board</b>
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The following are some leather problems and faults with knives and cutting board;

- When your blade is not perpendicular to the leather. Your cuts will appear to be straight but you will find out that they're not completely straight once you get to the process of burnishing.
- When cutting knives is not sharp there is not create clean, smooth cuts and other much fewer mistakes.
- When you do not use a coin or washer as a guide during cutting smooth curves in your leather, Line your coin up into the corner of your leather, following along the edge with your knife.
- When you guide the blade with your wrist instead of with your body, you may have a natural tendency to guide the blade with your wrist, but your wrist has a limited range of motion. Instead, keep your elbow in close to your body and pull the cutting motion with your shoulder. This will keep you on track and ensure that the blade remains straight.
- Using a hobby knife to cut thin leather of 1 mm or less can pull and crease the leather and make it harder to get a straight line since it's so fragile and more prone to



moving. It's best to cut thin leather of a thickness of 1mm or less with a [rotary cutter](#). For the best results, keep the rotary cutter as close to the edge of the ruler as you can get.

- When you don't slowly and gently drag the hobby knife along the cut line the edge of pattern become jagged. For thicker material, all you need is a sharp hobby knife to get a clean, straight cut, in addition to a sturdy ruler.
- As with knives, cutting surfaces need to be flat, smooth and somewhat soft so your blade doesn't get dulled or broken too easily.

**Scissors or Leather Shears:** with thinner, more pliable leather, a good sharp pair of scissors can often be the best tool for cutting out patterns, especially shapes with curved lines. Since leather of the same weight can vary in stiffness and texture, there is no hard-and-fast rule for when leather becomes too thick to cut effectively with scissors. The best way to find out is to test, but in general, leather above 9 or 10 oz will be too thick.

**A few things to keep in mind when using scissors on leather:**

Try to mostly cut against a flat surface, don't cut up in the air (unless you are cutting very small details).

Keep your scissors at a right angle to your leather and cutting surface, this helps you create a cut edge that is squared off, not beveled.

To create clean lines, cut with long slow strokes, not short choppy ones.

Practice first on scraps so you don't ruin your project.





## Cutting With X-Acto, Utility or Craft Knives



I find these types of knives to be the most versatile (and cheap) leather cutting tool. They work great for straight lines, and pretty good on curves too, with a bit of practice.

### **A few things to keep in mind:**

Cut on top of a cutting mat or other appropriate surface. Cutting surfaces need to be flat, smooth and somewhat soft so your blade doesn't get dulled or broken too easily. Hold your leather steady with one hand while pulling your knife smoothly along your marked pattern lines with the other.

Try to keep your blade held at right angles to your cutting surface.

Press down hard enough to cut all the way through in one pass to get the cleanest lines. You can always go back and cut a second time if you have to, but this sometimes creates a jagged edge.

Move the leather around between cuts to get the best cutting angle on each line. Your arm can only effectively cut straight lines at certain angles, and it's usually easier to move the leather than to move your whole body to give your arm the best leverage.

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To cut straight lines, you can use a metal ruler as a guide for your knife. Hold the ruler down firmly with your other hand as you cut.

Cut with a sharp blade. A sharp blade makes a HUGE difference. Change them often, they're cheap.

Always be safe! Keep your free hand out of the path of your x-acto blade and work slowly and consciously. These knives may be small, but they are extremely sharp and can be a very dangerous tool if you aren't being careful. Keep all your fingers!



Here's how I use both ruler-aided cutting and free-hand cutting on different parts of a pattern piece:

### **Cutting With a Cutting Wheel**

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Cutting wheels are basically like pizza cutters for leather. They have a sharp retractable wheel blade and come in different sizes. When used correctly, they create beautiful clean edges along straight lines, but they can be a bit tricky to master. I mostly use them for cutting straps.

**A few things to keep in mind when using a cutting wheel:**

Cut on top of a cutting mat or other appropriate surface. As with knives, cutting surfaces need to be flat, smooth and somewhat soft so your blade doesn't get dulled or broken too easily.

Use a long metal, or very thick plastic ruler as a guide. Your ruler should be at least as long as the line you need to cut. Hold your ruler down with your free hand and run your cutting wheel directly along the edge of the ruler, pushing away from you.

Press down firmly so you cut all the way through the leather.

Make your cut in one long stroke if possible, starting and stopping makes jagged edges more likely.

Always be safe! Keep your free hand out of the path of your cutting wheel blade and work slowly and consciously. Cutting wheels can be very dangerous if you aren't being careful. Keep all your fingers!



<b>Self-Check 5</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. List leather problems and faults with knives and cutting board. (5 points)
2. Define things that keep in mind when using cutting wheel. (5 points)





**Note: Satisfactory rating - 10 points**

**Unsatisfactory - below 10 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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<b>Information Sheet-6</b>	<b>Carrying out work according to OHS practices</b>
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**Work place safety**

The purpose of the Health and Safety policies and procedures is to guide and direct all employees to work safely and prevent injury, to themselves and others. All employees are encouraged to participate in developing, implementing, and enforcing Health and Safety policies and procedures.

Workplace safety is about preventing injury and illness to employees and volunteers in the workplace. Therefore, it's about protecting the nonprofit's most valuable asset: its workers. By protecting the employees' and volunteers' well-being, the nonprofit reduces the amount of money paid out in health insurance benefits, workers' compensation benefits and the cost of wages for temporary help. Also factor in saving the cost of lost-work hours (days away from work or restricted hours or job transfer), time spent in



orienting temporary help, and the programs and services that may suffer due to fewer service providers, stress on those providers who are picking up the absent workers' share or, worse case, having to suspend or shut down a program due to lack of providers.

### **Hazard identification and control**

OSHA describes a job hazard analysis as a technique that focuses on job tasks to identify hazards before they occur. The Nonprofit Risk Management Center thinks of it as looking at the parts to strengthen the whole. From either view, the analysis examines the relationship between the worker, the task, the tools and the work environment. Depending on the nature of the nonprofit's mission and programs, senior management may have to help workers manage specific hazards associated with their tasks:

- Chemical (toxic, flammable, corrosive, explosive)
- Electrical (shock/short circuit, fire, static, loss of power)
- Ergonomics (strain, human error)
- Excavation (collapse)
- Explosion (chemical reaction, over pressurization)
- Fall (condition results in slip/trip from heights or on walking surfaces — poor housekeeping, uneven surfaces, exposed ledges)
- Fire/heat (burns to skin and other organs)
- Mechanical (vibration, chaffing, material fatigue, failure, body part exposed to damage)
- Noise (hearing damage, inability to communicate, stress)
- Radiation (x-rays, microwave ovens, microwave towers for radio or tv stations or wireless technology)
- Struck by (falling objects and projectiles injure body)
- Struck against (injury to body part when action causes contact with a surface, as when screwdriver slips)
- Temperature extreme (heat stress, exhaustion, hypothermia)
- Visibility (lack of lighting or obstructed vision that results in error or injury)

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Weather phenomena (snow, rain, wind, ice that increases or creates a hazard

## **Addressing Safety and Health Hazards in the Workplace**

To make the workplace safer, the organization has to acknowledge which potential health and safety hazards are present. Or determine *where* and *what* and *how* a worker is likely to become injured or ill. It starts with analyzing individual workstations and program areas for hazards - the potential for harm - be it a frayed electrical cord, repetitive motion, toxic chemicals, mold, lead paint or lifting heavy objects.

### **Workplace safety program**

Any policy, procedure or training used by the organization to further the safety of paid and volunteer staff while working for the nonprofit is considered part of a workplace safety program. Workplace safety programs to reduce work-related injury and illness are concerned with:

- promoting and rewarding safe practices at work
- reducing injuries and illnesses at work
- eliminating fatalities at work

### **Workplace injury and illness prevention**

According to OSHA, work-related injury and illness prevention falls into three categories in order of priority: engineering controls, administrative controls, and personal protective equipment controls. We have adapted this list to make it more applicable to most nonprofit organizations:

- administrative controls
- written procedures and safe work practices,
- exposure time limitations (temperature and ergonomic hazards),
- monitor use of hazardous materials,
- alarms, signs and warnings,
- buddy system, and
- Training.

Workplace safety initiatives can be as simple as closing and locking the front door; replacing burned out lights inside and out; closing drawers before walking away from

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the desk or file cabinet; knowing and using proper lifting techniques; providing adjustable workstations to accommodate differences in people's stature and weight to eliminate repetitive motion, back, neck and shoulder injury; and using the proper tool for the job in an appropriate fashion. These and other basics should be universally adopted safety procedures in any workplace.

Workplace safety programs are important to all nonprofit organizations. Remember: employees and volunteers are a nonprofit's most important asset. One might argue that a nonprofit run by one employee or one volunteer is at greater risk than a nonprofit with thousands of staff members. The argument would be: If that one person is out of commission, the nonprofit's mission is nonfunctioning. For all intents and purposes that nonprofit is defunct. That is not to say the nonprofit with thousands of paid and volunteer employees is at less risk, just that there's more of a chance that someone can step into the void and perform the tasks of the injured or ill person.

### **Create ownership of the program**

Paid and volunteer staff members' health and safety are affected not only by their own actions but by those of their co-workers. Senior management must help staff members manage hazards associated with their work (tasks or responsibilities). They also need to make certain employees and volunteers are fit for work. Fitness for work involves drug and alcohol issues, physical and emotional well-being, and fatigue and stress.

People need to be engaged with the creation and implementation of the safety program for it to succeed. For example, the nonprofit is responsible for supplying employees and volunteers with appropriate safety equipment, but staff are responsible for wearing it at the right times and places. The nonprofit should provide paid and volunteer staff with training to help them carry out their assignments, but these staff members are responsible for attending this training, asking questions and telling supervisors if they do not understand what is being explained. This may require staff members to act assertively - to speak up for themselves: 'I do not understand how to use these, could you please show me.'

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## **Standard operating procedures**

A standard operating procedure (SOP) is a set of step-by-step instructions compiled by an organization to help workers carry out complex routine operations. SOPs aim to achieve efficiency, quality output and uniformity of performance, while reducing miscommunication and failure to comply with industry regulations.

Procedures are extensively employed to assist with working safely. They are sometimes called safe work methods statements (SWMS, pronounced as 'Swims'). They are usually preceded by various methods of analyzing tasks or jobs to be performed in a workplace, including an approach called job safety analysis, in which hazards are identified and their control methods described. Procedures must be suited to the literacy levels of the user, and as part of this, the readability of procedures is important

## **Measure performance**

In safety and health, continuous improvement involves seeking better ways to work, measuring performance and reporting against set targets. It is also about systematically evaluating compliance with procedures, standards and regulations; understanding the causes of incidents and injuries; and openly acknowledging and promptly correcting any deficiencies. Performance measurement can be:

- reduction in lost-time injury frequency
- reduction in medical treatment injury frequency (beyond first aid care)
- reduction in sick days used
- lower workers' compensation costs
- lower medical benefits payments (doctor's visits, prescription)

## **Safe Material Handling**

“Safe Material Handling” stresses eight general rules for safe material handling that can be adapted to any workplace:

1. Size up the load.
2. Look for special hazards.
3. Wear appropriate protective equipment.
4. Use the right equipment the right way.
5. Watch out for pinch points.

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6. Check your path.
7. Report material damage to your supervisor.
8. Know when to ask for help

Identifying risks and hazards should be a critical focus for everyone in the workplace. One of the most common sources of injury or risk is handling materials. Workplace storerooms are notorious danger zones in the workplace. So, instead of waiting for your next injury to happen, follow these 6 tips when handling materials in the workplace and stay safe.

#### 1. Technique is everything

Manual handling may be a big part or only a minor part in your day to day function at work.

With that said, correct lifting technique should be your first consideration, regardless of how many times you lift. Back injuries can be debilitating, so avoid them whenever possible and make sure your technique is correct.

Always remember to lift with your legs, get level with the item you're lifting and wherever possible use equipment designed to assist in the movement or lifting of heavy objects, like a two tier trolley.

#### 2. Help is never a bad idea

Not many people like asking for help in the workplace.

However, when it comes to your personal safety, you can't let that stand in the way. If handling materials that are dangerous, seek an expert opinion, or familiarize yourself with your workplace health & safety requirements. If handling a load that is too large, ask your colleague for assistance. Not only will it halve the work load but ensuring you seek an expert opinion will help identify any hazards you may have missed.

#### 3. Take the path most worn

When planning any material handling job, it is just as important to think of the journey you'll take as well as the amount of materials to move. Ensure safe passage from point A to point B by walking the path before you begin. Clear any obstacles along the way to avoid lifting over anything. If other colleagues use this path give them a head's up of the work to take place. By clearing the way you'll save time and avoid any potential hazards.

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#### 4. Fail to prepare, prepare to fail

If the materials you are handling are of a sensitive nature, i.e. chemicals, then always ensure you read the appropriate safe handling manual first. Not only could mishandling cause injury to you, but if it is a particularly hazardous chemical it could cause damage to others. Any chemical materials handling should be done so after reading the appropriate manuals. Consider things like safe handling, what to do if something does spill, procedures for alerting others. Factor these in when handling materials and you'll ensure everyone's safety.

#### 5. Protective gear is a must have

Personal protective equipment (PPE) is a must have for any job where you will be handling materials. From gloves to a back brace and everything in between, PPE is specifically designed to offer safety and functionality above all else. If the materials you are handling are kept in a particularly hazardous area you may consider steel cap boots, protective glasses or a hard hat.

Remember that it's the responsibility of your workplace to keep you safe – so don't be afraid to seek out these items. Whatever the situation PPE is a safety net that you can't afford to neglect when accessing materials in the workplace.

#### 6. Machine vs Man

When handling materials in the workplace, to be safe, sometimes we must accept our limitations. If a load is too heavy, stored too high or could be moved more efficiently, then use the machinery available. Instead of shifting that load by hand, try using a conveyor system or slides.

To ensure your safety and save your back, if it is possible to use machinery to handle materials then take that option. You'll avoid manual handling injuries and ensure safety in your workplace.

### **Safe storage of equipment**

#### General requirement of storage

An employer must ensure that all workplace materials, equipment, machines and tools are stored in a manner that does not create a risk to the safety or health of a worker or affect the safe operation of the workplace.

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If materials are stored outdoors, the effect of wind, wind gusts and other environmental conditions are considered when determining the manner of stacking and storing the material.

### **Reporting accidents and incidents**

Members often fail to complete Accident Book entries, or report incidents, including near misses, to either their managers or to local union health and safety representatives. By doing this, they are storing up problems for other workers, making the job of keeping staff safe harder for union reps and managers and may even be breaking the law.

### **Employers and risk assessments**

Employers have a legal duty to safeguard the safety and health at work of all their employees. Part of this requires them to assess the hazards and risks that their workers are exposed to and to ensure that they have placed adequate precautions in place. These risk assessments have to be revised at any time when evidence suggests that they are no longer valid. Reports of incidents, where there was a potential injury, even if no actual or serious injury occurred, could highlight deficiencies in the risk assessments that the employer has to remedy.

### **Safety representatives**

Safety reps do a valuable job in reducing accidents and injuries at work - independent surveys have found that the accident rate in workplaces where there are safety reps who are consulted properly by management can be as much as 50% less than workplaces with no safety representatives. But, to be effective, they need to know what is going on. They have a legal right to inspect the workplace, on a quarterly basis, but they also need to be told when incidents happen. If members put details into Accident Books, the rep can see what has been going on in the workplace over the preceding three months when they start their inspections.

### **Legal duty on employees**

Under the 1999 Management of Health and Safety at Work Regulations, employees have a legal duty to inform the employer of any work situation that they consider represents a serious and imminent danger to health and safety and, in addition, of any

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matter which they think represent a shortcoming in the employer's protection arrangements for health and safety.

So, if you know that something is a risk to safety, you must tell your employer (via your line manager) or bring it to the attention of your local PCS safety rep, which can follow the matter up with management.

<b>Self-Check 6</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is meant by work place safety? (5pts.)
2. What should be done in order to address Safety and Health Hazards in the Workplace? (5pts.)
3. Discuss about workplace injury and illness prevention? (5pts.)
4. Discuss on how to report accidents and incidents? (5pts.)



**Note: Satisfactory rating - 20 points**

**Unsatisfactory - below 20 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = \_\_\_\_\_

Rating: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_

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2. \_\_\_\_\_

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3. \_\_\_\_\_

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4

<b>Instruction Sheet</b>	<b>LG21: Check Cut Components</b>
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**This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –**

- Component checking against job specification, addressing faults and following standard procedures

**This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –**

- Components are checked against job specifications and workplace standards.
- Fault or irregularities are addressed following standard procedures

### **Instruction sheet**

Read the specific objectives of this Learning Guide.

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- 1- Follow all the instructions described.
- 2- Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.
- 3- Accomplish the “Self-check 1” on page 6.
- 4- Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 1).
- 5- If your rating is unsatisfactory, see your teacher for further instructions.
- 6- If you earned a satisfactory evaluation, submit your accomplished Self-check that will form part of your training portfolio. And then you can proceed to Learning Guide #22.

<b>Information Sheet-1</b>	<b>Component checking against job specification, addressing faults and following standard procedures</b>
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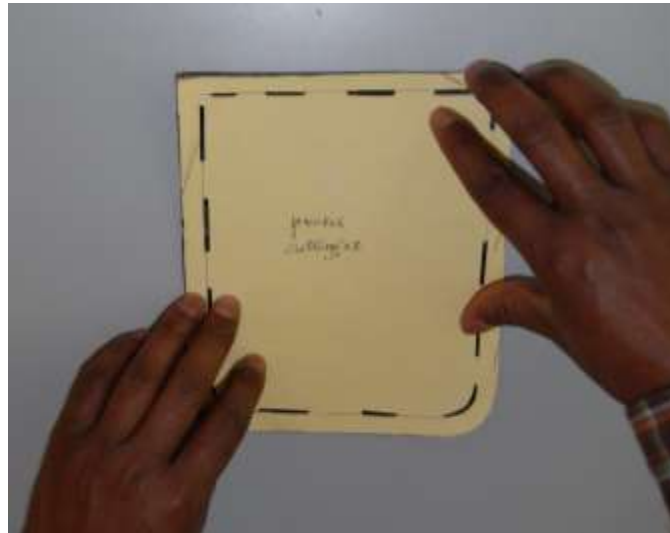
### Checking Cut Components for Size and Quality of the cut edge



**Figure: from right to left pocket making pattern, pocket cutting pattern and pocket component cut from synthetic leather**



After cutting, component should be checked with the cutting pattern for exact size fitting including allowances as follows.



Then the cut component should be checked with the making pattern to get the exact pocket size via the following steps:

**Step 1:** mark on cut leather component using the perforations on the cutting pattern





**Step 2:** lay the making pattern on the marked leather component to check for exact pocket size as follows



The quality of the edge of the cut component can be checked against the pattern edge as follows.



In conclusion, once the model (the particular product) to be cut with all its specification has arrived to the cutting department, the cutting person should prepare all the necessary materials i.e.

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- Leather, lining, reinforcements and all other materials accordingly including the color and texture.
- Check the components count the number of components that the product contains.
- Identify and prioritize them according to their size and shape
- Check how many times they should be cut their position (left/right) and so on.

<b>Self-Check 1</b>	<b>Written Test</b>
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**Directions:** Answer the question listed below.

- 1- Explain how a component should be checked? (5pts.)
- 2- Explain the different defects usually found in hides. (5pts.)





**Note: Satisfactory rating - 10 points**

**Unsatisfactory - below 10 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_

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2. \_\_\_\_\_



## Addressing faults or irregularities

### Factors affecting cutting quality

- Geometric design of blade edge
  - Straight edge
  - Saw tooth edge
  - Serrated edge
  - Wave edge
- Blade edge sharpness (coarse to fine)
- Blade composition (Type of steel)
- VCSV
- Horizontal cutting velocity**

**Instruction Sheet**

**LG22: Dispatch Completed Work**

**This learning guide is developed to provide you the necessary information regarding the following content coverage and topics –**

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- Dispatching components with work place procedures
- Recording faults

**This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –**

- Components are bundled, stacked, stored or dispatched in accordance with Workplace procedures
- Faults are recorded as required.

**Learning Instructions:**

35. Read the specific objectives of this Learning Guide.

36. Follow all the instructions described.

37. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask your teacher for assistance if you have hard time understanding them.

38. Accomplish the “Self-check 1” on page 6.

39. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 1).

40. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions.

41. Accomplish the “Self-check 2” on page 9.

42. Ask your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You will get the key answer only after you finished answering the Self-check 2).

43. If you earned a satisfactory evaluation, submit your accomplished Self-checks which will form part of your training portfolio. And that will be the completion of the Module (Competency).

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<b>Information Sheet-1</b>	<b>Bundling, stacking and storing or dispatching components in accordance with work place procedures</b>
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### **What does DISPATCHER mean?**

Dispatchers are communications personnel responsible for receiving and transmitting pure and reliable messages, equipment, and recording other important information.

### **Bundling, stacking and storing components according to OHS**

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Bundling is the process of disassembling the stacked and cut pieces and reassembling them in production lots grouped accordingly. Manufacturers use a variety of bundling methods depending upon their needs, with four basic systems being the most common among local manufacturers. OFF LOADING is the process of removing cut parts from the cutting table, counting, ticketing, and grouping them.

- The method and sequence this follows depend on the production system, how the materials are to be transported to the sewing facility, and any additional operations that may be completed in the cutting room.

### **Position Marking**

Marking the components with guides for sewing and other operations.

- If the nature of the fabric is prohibit from drilling, marking position may be done by chalk
- The marking medium must be such that
  - It retains its sticking qualities until the marks are used
  - It should be removed quickly when necessary
  - It should not affect the color of fabric or thread
  - Should not be dangerous for operators

### **Shade Marking**

- To ensure that the components cut from different shades of the same color do not get mixed up during assembly process/ every component for one garment is marked with a unique number, usually printed on a small sticker.



### **Bundle Preparation**

Bundles of cut work are prepared according to size. Color and quantities, their actual composition determined by the requirements of the sewing room.

#### **A. Item Bundling**

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All pieces that comprise the product are bundled together.

### B. Group Bundling

Several (10-20) components are put together in a bundle and given to a single operator or team to sew.

### C. Progressive Bundling

Pieces corresponding to specific sections of the product are bundled together and given to one operator. Other operators sew other parts of the garment, which are then assembled into the finished product in the final phase.

### Bundle Tickets

The tickets identify each bundle and in themselves play an important role in production planning and control for the sewing and finishing sections.

Order no. 6014	Bundle	Quan.	Op.
	1480	22	S34
Bundle no. 1480	Operator		
	Bundle	Quan.	Op.
	1480	22	S31
Quantity 22	Operator		
Style no. 3642	Bundle	Quan.	Op.
	1480	22	S29
Size 16	Operator		
Section Sleeves	Bundle	Quan.	Op.
	1480	22	S28
Remains with bundle	Operator	652	

<b>Self-Check 1</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below.

1. What is meant by bundling? (5pts.)
2. Explain the difference between item bundling, group bundling and progressive bundling? (5pts.)



**Note: Satisfactory rating - 10 points**

**Unsatisfactory - below 10 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

1. \_\_\_\_\_

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2.

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<b>Information Sheet-2</b>	<b>Recording faults as required</b>
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**Completing and Maintaining Records:**

- Bundle tickets
- Organization of work procedures and specifications
- Organizational or external personnel
- Customer/s requirements
- Work involves assembly of leather goods using table-based production processes
- Competence must be demonstrated in working to defined procedures/methods either individually or in a team environment
- Work is assessed in accordance with statutory requirements, organization insurance requirements, OH&S legislation, manual handling procedures and relevant health regulations
- Work organization procedures and practices relating to the table work operations used in the manufacture of leather components and goods





- Conditions of service, legislation and industrial agreements including workplace agreements and awards and Federal or State/Territory legislation
- Standard work practices
- Reporting actions include verbal and written communication in accordance with organizational policies and procedures
- Communication may be oral, written or visual and can include simple data
- Being responsible for the maintenance of own work quality and being required to contribute to the quality improvement of team or section output, where necessary
- Safety, environmental, housekeeping and quality are as specified by machine/equipment manufacturers, regulatory authorities and the enterprise

Applicable regulations and legislation may include:

- Occupational health and safety legislation relevant to workplace activities
- Workers' compensation legislation

<b>Self-Check 2</b>	<b>Written Test</b>
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**Directions:** Answer all the questions listed below.

1. Explain how reporting should take place? (7pts.)
2. State the applicable regulation and legislations? (3pts.)

**Note: Satisfactory rating - 10 points**

**Unsatisfactory - below 10 points**

You can ask your teacher for the copy of the correct answers

**Answer Sheet**

Score = _____
Rating: _____

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Short Answer Questions**

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1. \_\_\_\_\_

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2. \_\_\_\_\_

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## REFERENCE

- <http://www.wikipedia.org/wiki/Leather>
- [http://www.ehow.com/how\\_4835223\\_check-leather-quality.html](http://www.ehow.com/how_4835223_check-leather-quality.html)
- [http://www.ehow.com/how\\_5757262\\_store-leather-hides.html/](http://www.ehow.com/how_5757262_store-leather-hides.html/)
- <http://www.dhgate.com/wholesale/faux+leather+storage+case.html>

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